

AD A 050248

BS 2

NPS55-77-39

NAVAL POSTGRADUATE SCHOOL

Monterey, California



AD No. _____
DDC FILE COPY

A TABLE OF
LANCHESTER-CLIFFORD-SCHLÄFLI FUNCTIONS
by
James G. Taylor
and
Gerald G. Brown
October 1977

DISTRIBUTION STATEMENT A
Approved for public release
Distribution Unlimited

DDC
RECEIVED
FEB 22 1978
D

NAVAL POSTGRADUATE SCHOOL
Monterey, California

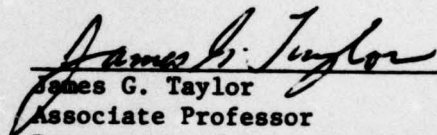
Rear Admiral Isham Linder
Superintendent

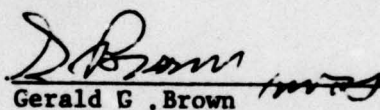
Jack R. Borsting
Provost

This research has been partially supported by the U.S. Army Research Office, Durham, North Carolina with R&D Project No. 1L161102BH57-05 Math (funded under MIPR No. ARO 22-77) and partially by the Office of Naval Research.

Reproduction of all or part of this report is authorized.

This report was prepared by:

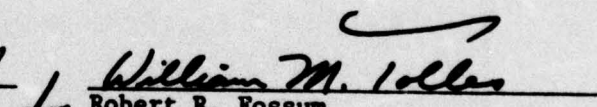

James G. Taylor
Associate Professor
Department of Operations Research

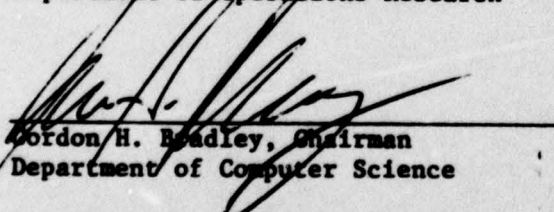

Gerald G. Brown
Associate Professor
Departments of Operations Research
and Computer Science

Reviewed by:

Released by:


Michael G. Sovereign, Chairman
Department of Operations Research


for Robert R. Fossum
Dean of Research


Gordon H. Roadley, Chairman
Department of Computer Science

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER 14 NPS55-77-39	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) 9 A Table of Lanchester-Clifford-Schläfli Functions	5. TYPE OF REPORT & PERIOD COVERED 9 Technical rept.	
7. AUTHOR(s) 10 James G/ Taylor and Gerald G/ Brown	6. PERFORMING ORG. REPORT NUMBER	
9. PERFORMING ORGANIZATION NAME AND ADDRESS Naval Postgraduate School Monterey, Ca. 93940	8. CONTRACT OR GRANT NUMBER(s) #4801411, 14161102BH57 #480141105	
11. CONTROLLING OFFICE NAME AND ADDRESS U. S. Army Research Office Durham, North Carolina	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS ARO 22-77 & 61153N, NR-277-229, RR 014-11-01 N.0001477 WFR70192 11 October 1977	
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) 18 ARO / 19 14961.1-M	13. NUMBER OF PAGES 90 12 92p.	
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited.	15. SECURITY CLASS. (of this report) Unclassified	
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE	
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Lanchester Theory of Combat Special Functions Combat Modelling Deterministic Combat Attrition Attrition Modelling Lanchester-Clifford-Schläfli Functions Combat Dynamics		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This report contains the most extensive set of tables currently available of Lanchester-Clifford-Schläfli (LCS) functions. These functions may be used to analyze Lanchester-type combat between two homogeneous forces modelled by power attrition-rate coefficients with "no offset." Theoretical background for the LCS functions is given, as well as a narrative description of the physical circumstances under which the associated Lanchester-type combat model may be expected to be applicable. Numerical examples are given		

DD FORM 1 JAN 73 1473

EDITION OF 1 NOV 66 IS OBSOLETE
S/N 0102-014-6601

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

251450

next page
pk

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

20. Cont.

to illustrate the use of the LCS functions for analyzing "aimed-fire" combat modelled by the power attrition-rate coefficients with "no offset." Our results and these tabulations allow one to study this particular variable-coefficient combat model almost as easily and thoroughly as Lanchester's classic constant-coefficient model.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

A TABLE OF LANCHESTER-CLIFFORD-SCHLÄFLI FUNCTIONS

by

James G. Taylor
Department of Operations Research

and

Gerald G. Brown
Departments of Operations Research
and Computer Science

ACCESSION for	
RTIS	White Section <input checked="" type="checkbox"/>
VDC	Buff Section <input type="checkbox"/>
UNANNOUNCED	<input type="checkbox"/>
JUSTIFICATION	
BY	
DISTRIBUTION/AVAILABILITY CODES	
Dist.	AVAIL. and/or SPECIAL
A	

Naval Postgraduate School
Monterey, California

This research was partially supported by the U. S. Army Research Office, Durham, R&D Project No. 1L161102BH57-05 Math (funded under MIPR No. ARO 22-77) and partially by the Office of Naval Research.

DDC
RECEIVED
FEB 22 1978
RECEIVED
D

TABLE OF CONTENTS

	PAGE
1. Introduction	1
2. Variable-Coefficient Lanchester-Type Equations of Modern Warfare	2
3. Combat Modelled with Power Attrition-Rate Coefficients.....	5
4. Lanchester-Clifford-Schlafli (LCS) Functions	12
5. Use of LCS Functions for Analyzing Combat	18
6. Tabulation of LCS Functions	21
7. Numerical Examples	22
8. Final Remarks	32
References	35
Appendix: Tabulation of LCS Functions $F_{\alpha}(x)$, $H_{1-\alpha}(x)$, and $T_{\alpha}(x)$ for 25 Fractional Values of α	36

1. Introduction

Lanchester-type* differential-equation combat models are an important tool for analyzing many important problems of military operations research. In such a combat model, a so-called attrition-rate coefficient represents the fire effectiveness of a particular weapon-system type against a particular target type, i.e. the weapon-system type's effective firepower against such a target. Time-dependent attrition-rate coefficients are used to model temporal variations in firepower on the battlefield. Thus, we see that time-dependent attrition-rate coefficients are important (and, in fact, essential [4-6]) for the quantitative analysis of hypothetical combat.

Militarily realistic computer-based Lanchester-type models of quite complex military systems have been developed for almost the entire spectrum of combat operations, from combat between battalion-sized units to theater-level operations. Nevertheless, a simple combat model may yield a clearer understanding of significant interrelationships that are difficult to perceive in a more complex model, and such insights can subsequently provide valuable guidance for more detailed computerized investigations. In this report we consider such a simplified variable-coefficient Lanchester-type model of combat between two homogeneous forces.

For this variable-coefficient Lanchester-type model of combat between two homogeneous forces, different functional forms for the attrition-rate coefficients lead to different mathematical functions being involved in representing and computing the force-level trajectories. In a previous paper [5] we have discussed the plausibility of the hypothesis that except for the special case of a constant ratio of attrition-rate coefficients,

* So-called after pioneering work of F. W. Lanchester [3].

the solutions to such differential equations cannot be represented in terms of "elementary" functions of analysis. Thus, new transcendental functions arise in the study of combat modelled with time-dependent attrition-rate coefficients. In particular, we have previously introduced [5-6] so-called Lanchester-Clifford-Schläfli (LCS) functions for analyzing combat modelled with power attrition-rate coefficients with "no offset" (see Section 3 below).

In the Appendix to this report is contained the most extensive set of tables currently available for the LCS functions: it contains tables of five-decimal-place values of the hyperbolic-like LCS functions $F_{\alpha}(x)$, $H_{1-\alpha}(x)$, and $T_{\alpha}(x)$ (see Section 4 below) for 25 fractional values of α (see Section 6 below). The main body of this report provides the theoretical and modelling background for the use of these tables. In particular, we examine a model of a constant-speed attack on a static defensive position and show how associated range-dependent kill rates give rise to time-dependent attrition-rate coefficients with "no offset." Numerical computations are presented to illustrate the use of the LCS functions for analyzing such "aimed-fire" combat. As a consequence of the availability of these tables, one can now study this variable-coefficient combat model almost as easily and thoroughly as Lanchester's classic constant-coefficient model.

2. Variable-Coefficient Lanchester-Type Equations of Modern Warfare.

We consider combat between two homogeneous forces modelled by the following variable-coefficient Lanchester-type [3] (see [4,5]) equations of modern warfare

$$\begin{cases} \frac{dx}{dt} = -a(t)y & \text{with } x(0) = x_0, \\ \frac{dy}{dt} = -b(t)x & \text{with } y(0) = y_0, \end{cases} \quad (2.1)$$

where $t = 0$ denotes the time at which the battle begins, $x(t)$ and $y(t)$ denote the numbers of X and Y at time t , and $a(t)$ and $b(t)$ denote time-dependent Lanchester attrition-rate coefficients, which represent the effectiveness of each side's fire. These coefficients depend on variables such as force separation, tactical posture of targets, rate of target acquisition, firing rate, etc. (see [4-7] for further details). Variable attrition-rate coefficients are used to model temporal variations in firepower on the battlefield. In any analysis of combat, moreover, we should use the above equations (2.1) only for x and $y \geq 0$ and, for example, set $dx/dt = 0$ when $x = 0$, since negative force levels have no physical meaning.

Mathematically, we assume that the attrition-rate coefficients $a(t)$ and $b(t)$ are defined, positive, and continuous for $t_0 < t < +\infty$ with $t_0 \leq 0$. We also assume that $a(t)$ and $b(t) \in L(t_0, T)$ for any finite $T \geq t_0$. We further take $a(t)$ and $b(t)$ to be given in the form

$$a(t) = k_a g(t), \quad \text{and} \quad b(t) = k_b h(t), \quad (2.2)$$

where k_a and k_b are positive constants chosen so that $a(t)/b(t) = k_a/k_b$ when $g(t) \equiv h(t)$. We introduce the combat-intensity parameter λ_I and the relative-fire-effectiveness parameter λ_R defined by

$$\lambda_I = \sqrt{k_a k_b}, \quad \text{and} \quad \lambda_R = k_a/k_b. \quad (2.3)$$

From our assumptions about $a(t)$ and $b(t)$, it follows that, for example, $a(t) \notin L(t_0, T)$ implies $\int_{t_0}^T a(t) dt = +\infty$.

The X force level as a function of time may be represented as [5,6]

$$x(t) = x_0 \{C_Y(0)C_X(t) - S_Y(0)S_X(t)\} - y_0 \sqrt{\lambda_R} \{C_X(0)S_X(t) - S_X(0)C_X(t)\}, \quad (2.4)$$

where the hyperbolic-like general Lanchester functions (GLF) $C_X(t)$ and $S_X(t)$ are linearly-independent solutions to the X force-level equation

$$\frac{d^2 x}{dt^2} - \left\{ \frac{1}{a(t)} \frac{da}{dt} \right\} \frac{dx}{dt} - a(t)b(t)x = 0, \quad (2.5)$$

with initial conditions

$$C_X(t_0) = 1, \quad S_X(t_0) = 0, \quad (2.6)$$

$$\{1/a(t_0)\} dC_X/dt(t_0) = 0, \quad \{1/a(t_0)\} dS_X/dt(t_0) = 1/\sqrt{\lambda_R}.$$

Here t_0 denotes the largest finite time at which $a(t)$ or $b(t)$ ceases to be defined, positive, or continuous. The Y force level as a function of time is given by a similar expression, with $C_Y(t)$ and $S_Y(t)$ being analogously defined for the corresponding Y force-level equation.

It is sometimes convenient to introduce the new independent variable τ defined by

$$\tau = \int_{t_0}^t \sqrt{a(s)b(s)} ds . \quad (2.7)$$

It is readily seen that the transformation $\tau = \tau(t)$ is well defined and invertible. Let us denote $\tau(0)$ as τ_0 . We observe that $t_0 \leq 0$ implies that $\tau_0 \geq 0$. If we denote the "average intensity of combat" as $\overline{\sqrt{a(t)b(t)}}$, then

$$\overline{\sqrt{a(t)b(t)}} t = \left\{ (1/t) \int_0^t \sqrt{a(s)b(s)} ds \right\} t = \tau - \tau_0 . \quad (2.8)$$

The substitution (2.7) transforms (2.5) into

$$\frac{d^2 x}{d\tau^2} - \left(\frac{1}{2}\right) \left\{ \frac{d}{d\tau} \ln R(\tau) \right\} \frac{dx}{d\tau} - x = 0 , \quad (2.9)$$

with initial conditions

$$x(\tau_0) = x_0 , \quad \text{and} \quad \left\{ 1/\sqrt{R(\tau_0)} \right\} dx/d\tau(\tau_0) = -y_0 ,$$

where $R(\tau) = a(t)/b(t)$.

3. Combat Modelled with Power Attrition-Rate Coefficients.

The above equations (2.1) basically apply to "aimed-fire" combat when target-acquisition times do not depend on the numbers of targets available (see [5,6] for further details). A large class of tactical situations of interest can be modelled with the following general power attrition-rate coefficients [5-7]

$$a(t) = k_a (t + C)^\mu, \quad \text{and} \quad b(t) = k_b (t + C + A)^\nu, \quad (3.1)$$

where A and $C \geq 0$. We will call A the offset parameter, since it allows us to model (with μ and $\nu \geq 0$) battles between opposing weapon systems with different maximum effective ranges (see [5,6]). We will call C the starting parameter, since it allows us to model (again, with μ and $\nu \geq 0$) battles that begin within the maximum effective ranges of the two opposing systems. We observe that for the general power attrition-rate coefficients (3.1) we have $t_0 = -C$, and μ and ν must be > -1 in order that $a(t)$ and $b(t) \in L(t_0, T)$.

The above nomenclature is motivated and possible applications of our work are indicated by considering S. Bonder's model of the constant-speed attack on a static defensive position (see [4-7] for further details)

$$\frac{dx}{dt} = -\alpha(r)y, \quad \text{and} \quad \frac{dy}{dt} = -\beta(r)x, \quad (3.2)$$

where r denotes the range between opposing forces, and $\alpha(r)$ and $\beta(r)$ denote range-dependent attrition-rate coefficients. Range is related to time by

$$r(t) = R_0 - vt, \quad (3.3)$$

where R_0 denotes the opening range of battle and $v > 0$ denotes the constant attack speed. For example, let us consider the constant-speed attack of a homogeneous Y force against the static defensive position of a homogeneous X force. Figure 1 diagrammatically portrays this situation.

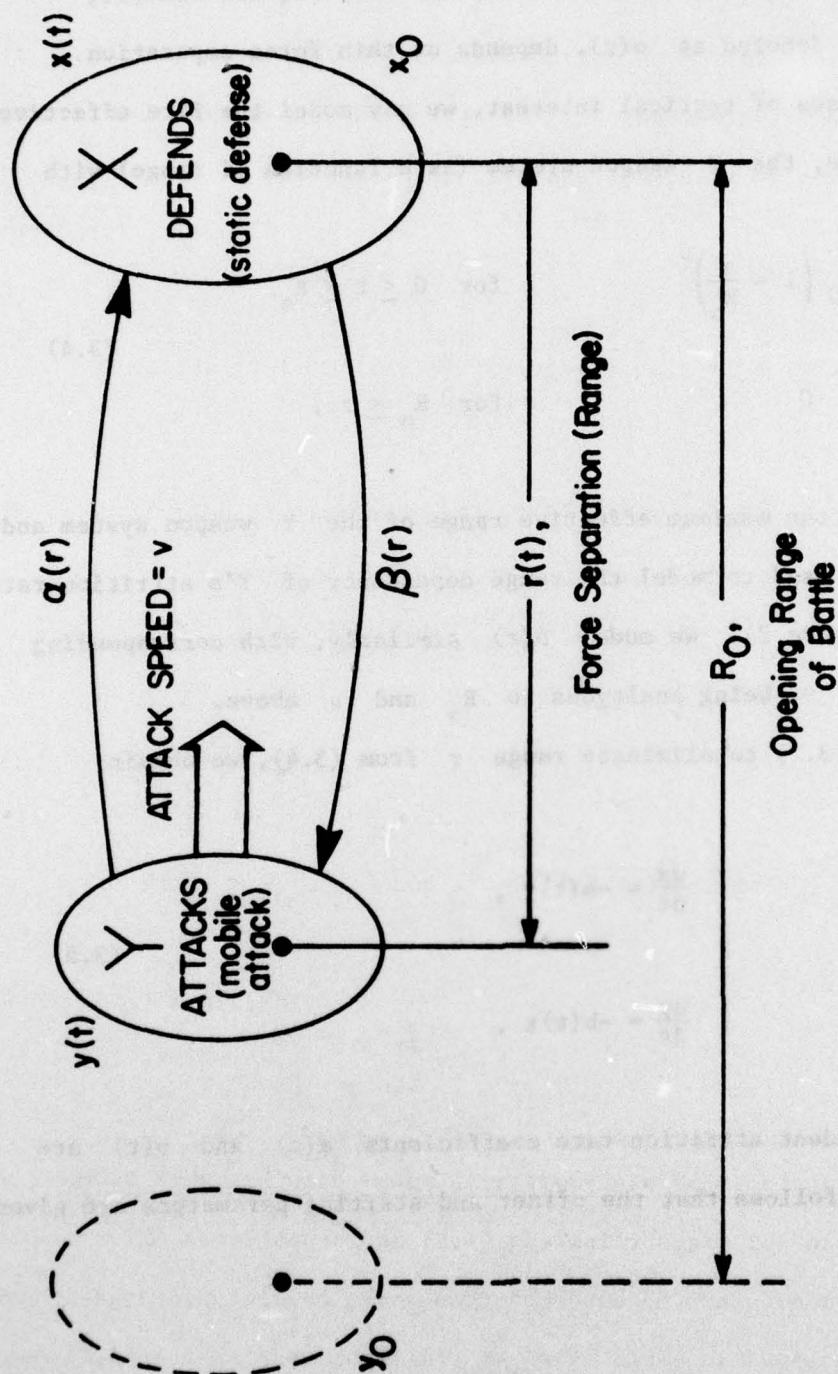


Figure 1. Diagram of Bonder's constant-speed attack model.
 Force separation, $r(t)$, is given by $r(t) = R_0 - vt$.

The basic idea is that force separation, i.e. range between the opposing forces, changes over time, and the fire effectiveness of, for example, a single Y firer, denoted as $\alpha(r)$, depends on this force separation.

In many cases of tactical interest, we may model the fire effectiveness of, for example, the Y weapon system (as a function of range) with

$$\alpha(r) = \begin{cases} \alpha_0 \left(1 - \frac{r}{R_\alpha}\right)^\mu & \text{for } 0 \leq r \leq R_\alpha, \\ 0 & \text{for } R_\alpha \leq r, \end{cases} \quad (3.4)$$

where R_α denotes the maximum effective range of the Y weapon system and $\mu \geq 0$. Here μ is used to model the range dependency of Y's attrition-rate coefficient (see Figure 2). We model $\beta(r)$ similarly, with corresponding quantities R_β and ν being analogous to R_α and μ above.

If we use (3.3) to eliminate range r from (3.4), we obtain

$$\begin{cases} \frac{dx}{dt} = -a(t)y, \\ \frac{dy}{dt} = -b(t)x, \end{cases} \quad (3.5)$$

where the time-dependent attrition-rate coefficients $a(t)$ and $b(t)$ are given by (3.1). It follows that the offset and starting parameters are given by

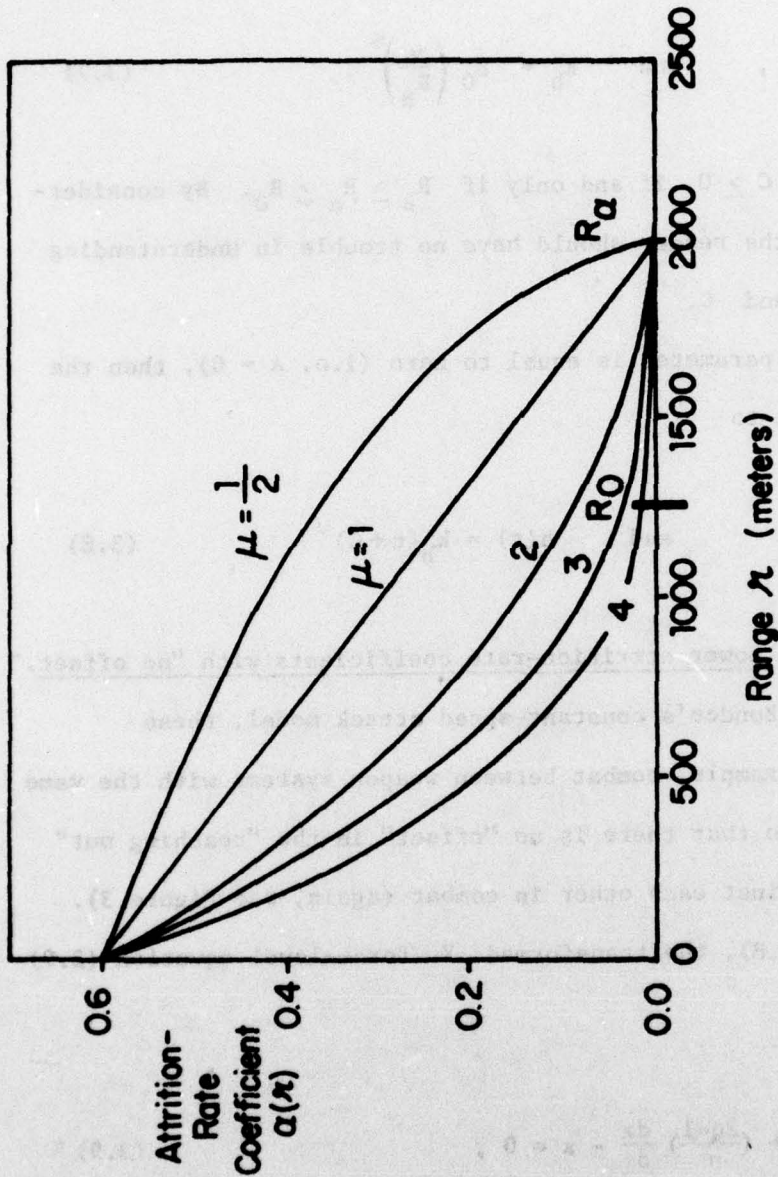


Figure 2. Dependence of Y's attrition-rate coefficient $\alpha(r)$ on the exponent μ with the maximum effective range of the weapon system and kill rate at zero range held constant. [NOTES: 1. The maximum effective range of the system is denoted as $R_\alpha = 2000$ meters. 2. $\alpha(0) = \alpha_0 = 0.6X$ casualties/(unit time \times number of Y firers) denotes the weapon-system kill rate for Y at zero force separation (range). 3. The opening range of battle is denoted as $R_0 = 1250$ meters and (as shown) $R_0 < R_\alpha$.]

$$A = \left(\frac{R_\beta - R_\alpha}{v} \right), \quad \text{and} \quad C = \left(\frac{R_\alpha - R_0}{v} \right), \quad (3.6)$$

and that

$$k_a = \alpha_0 \left(\frac{v}{R_\alpha} \right)^\mu, \quad \text{and} \quad k_b = \beta_0 \left(\frac{v}{R_\beta} \right)^\nu. \quad (3.7)$$

We observe that A and $C \geq 0$ if and only if $R_\beta \geq R_\alpha \geq R_0$. By considering (3.6) and Figure 3, the reader should have no trouble in understanding our terminology for A and C .

When the offset parameter is equal to zero (i.e. $A = 0$), then the coefficients (3.1) reduce to

$$a(t) = k_a (t+C)^\mu, \quad \text{and} \quad b(t) = k_b (t+C)^\nu. \quad (3.8)$$

We will refer to (3.8) as power attrition-rate coefficients with "no offset."

As we have seen above in Bonder's constant-speed attack model, these coefficients model, for example, combat between weapon systems with the same maximum effective range so that there is no "offset" in the "reaching out" of the weapon systems against each other in combat (again, see Figure 3). For these coefficients (3.8), the transformed X force-level equation (2.9) becomes

$$\frac{d^2 x}{d\tau^2} + \left(\frac{2q-1}{\tau} \right) \frac{dx}{d\tau} - x = 0, \quad (3.9)$$

with initial conditions

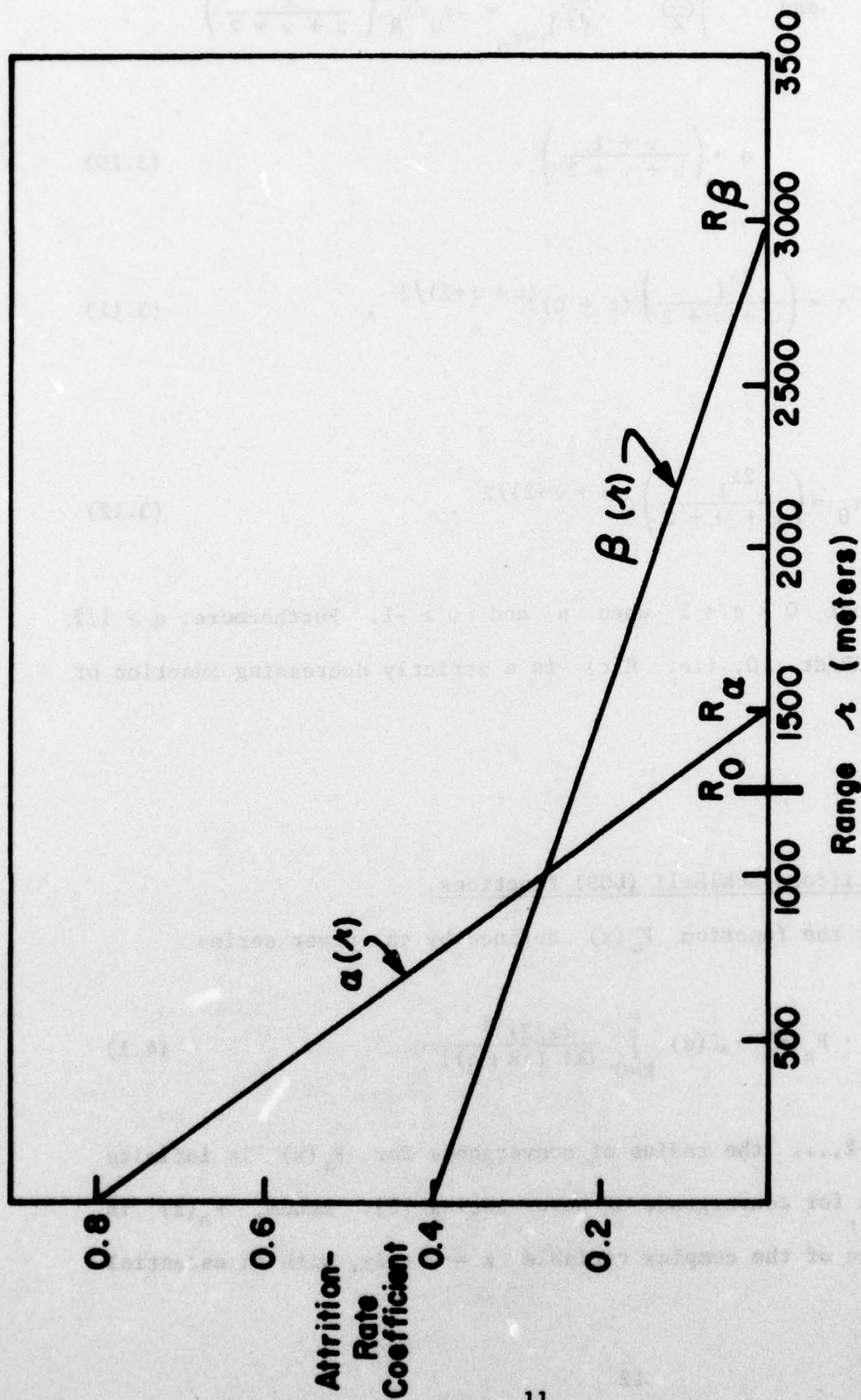


Figure 3. Explanation of the offset parameter A and the starting parameter C for power attrition-rate coefficients modelling constant-speed attack. [NOTES: 1. The maximum effective ranges of the X and Y weapon systems are denoted as R_α and R_β , respectively. 2. The opening range of battle is denoted as R_0 and (as shown) $R_0 < \text{minimum}(R_\alpha, R_\beta)$. 3. The offset parameter is given by $A = (R_\beta - R_\alpha)/v$. 4. The starting parameter is given by $C = (R_\alpha - R_0)/v$.]

$$x(\tau_0) = x_0, \quad \text{and} \quad \left\{ \left(\frac{\tau}{2} \right)^{2q-1} \frac{dx}{d\tau} \right\}_{\tau=\tau_0} = -y_0 \sqrt{\lambda_R} \left(\frac{\lambda_I}{\mu + \nu + 2} \right)^{2q-1}.$$

Here

$$q = \left(\frac{\nu + 1}{\mu + \nu + 2} \right), \quad (3.10)$$

$$\tau = \left(\frac{2\lambda_I}{\mu + \nu + 2} \right) (t + C)^{(\mu + \nu + 2)/2}, \quad (3.11)$$

and

$$\tau_0 = \left(\frac{2\lambda_I}{\mu + \nu + 2} \right) C^{(\mu + \nu + 2)/2}. \quad (3.12)$$

Let us observe that $0 < q < 1$ when μ and $\nu > -1$. Furthermore, $q > 1/2$ if and only if $dR/dt < 0$, i.e. $R(t)$ is a strictly decreasing function of time.

4. Lanchester-Clifford-Schl\"{a}fli (LCS) Functions.

Consider the function $F_\alpha(x)$ defined by the power series

$$F_\alpha(x) = \Gamma(\alpha) \sum_{k=0}^{\infty} \frac{(x/2)^{2k}}{\{k! \Gamma(k+\alpha)\}}. \quad (4.1)$$

For $\alpha \neq 0, -1, -2, \dots$ the radius of convergence for $F_\alpha(x)$ is infinite by the ratio test for convergence of power series [2]. Hence, $F_\alpha(z)$ is an entire function of the complex variable $z = x + iy$, with an essential

singularity at the point at infinity. Now consider the function $H_\alpha(x)$ defined by the infinite series

$$H_\alpha(x) = \Gamma(\alpha) \sum_{k=0}^{\infty} \frac{(x/2)^{2(k+\alpha)}}{\{k! \Gamma(k+\alpha+1)\}}. \quad (4.2)$$

Observing that

$$H_\alpha(x) = (1/\alpha)(x/2)^{2\alpha} F_{\alpha+1}(x), \quad (4.3)$$

we see that for $\alpha > 0$ the infinite series (4.2) is uniformly convergent on compact subsets of the complex plane. From (4.3) one can readily deduce the recursive relation

$$F_\alpha(x) = F_{\alpha+1}(x) + \left\{ \frac{(x/2)^2}{\alpha(\alpha+1)} \right\} F_{\alpha+2}(x). \quad (4.4)$$

We will call the functions $F_\alpha(x)$ and $H_\alpha(x)$ Lanchester-Clifford-Schläfli (LCS) functions (see Note 10 on pp. 66-67 of [5]). Other properties are readily deduced and are given in Table I.

The function $F_\alpha(x)$ satisfies the linear second-order ordinary differential equation

$$\frac{d^2 F_\alpha}{dx^2} + \left(\frac{2\alpha-1}{x} \right) \frac{dF_\alpha}{dx} - F_\alpha = 0, \quad (4.5)$$

with initial conditions

Table I. Properties of the LCS Functions $F_\alpha(x)$ and $H_\alpha(x)$.

1. $dF_\alpha/dx = (x/2)^{1-2\alpha} H_\alpha(x)$
2. $dH_\alpha/dx = (x/2)^{2\alpha-1} F_\alpha(x)$
3. $F_\alpha(x)F_{1-\alpha}(x) - H_\alpha(x)H_{1-\alpha}(x) = 1 \quad \forall x$
where α is not an integer (including zero)
4. $F_\alpha(x=0) = 1$
5. $H_\alpha(x=0) = 0 \quad \text{for } \alpha > 0$
6. $dF_\alpha/dx(x=0) = 0$
7. $\{(x/2)^{1-2\alpha} dH_\alpha/dx\}_{x=0} = 1$
8. $F_{1/2}(x) = \cosh x$
9. $H_{1/2}(x) = \sinh x$

$$F_\alpha(0) = 1, \quad \text{and} \quad \frac{dF_\alpha}{dx}(0) = 0,$$

while $H_\alpha(x)$ satisfies

$$\frac{d^2 H_\alpha}{dx^2} - \left(\frac{2\alpha-1}{x}\right) \frac{dH_\alpha}{dx} - H_\alpha = 0, \quad (4.6)$$

with initial conditions

$$H_\alpha(0) = 0, \quad \text{and} \quad \left\{ \left(\frac{x}{2}\right)^{1-2\alpha} \frac{dH_\alpha}{dx} \right\}_{x=0} = 1.$$

Thus, $\{F_\alpha, H_{1-\alpha}\}$ is a fundamental system of solutions to

$$\frac{d^2 F}{dx^2} + \left(\frac{2\alpha-1}{x}\right) \frac{dF}{dx} - F = 0, \quad (4.7)$$

with Wronskian $W(F_\alpha, H_{1-\alpha}) = (x/2)^{1-2\alpha}$. It follows that the GLF for the X and Y force-level equations for combat modelled with the attrition-rate coefficients (3.8) are given by

$$C_X(t) = F_q(\tau(t)), \quad S_X(t) = \left(\frac{\lambda_I}{\mu + \nu + 2}\right)^{2q-1} H_p(\tau(t)), \quad (4.8)$$

$$C_Y(t) = F_p(\tau(t)), \quad S_Y(t) = \left(\frac{\lambda_I}{\mu + \nu + 2}\right)^{1-2q} H_q(\tau(t)), \quad (4.9)$$

where $p = 1-q$. If we define

$$T_{\alpha}(x) = H_{1-\alpha}(x)/F_{\alpha}(x), \quad (4.10)$$

then

$$T_X(t) = \frac{S_X(t)}{C_X(t)} = \left(\frac{\lambda_I}{\mu + \nu + 2} \right)^{2q-1} \frac{H_p(\tau(t))}{F_q(\tau(t))}, \quad (4.11)$$

or

$$T_X(t) = \left(\frac{\lambda_I}{\mu + \nu + 2} \right)^{2q-1} T_q(\tau(t)), \quad (4.12)$$

where $T_X(t)$ denotes a hyperbolic-like GLF, which corresponds to the hyperbolic tangent. Observing that for $\mu, \nu > -1$, $\lim_{t \rightarrow +\infty} \tau(t) = +\infty$, we see that $T_{\alpha}(x)$ is a strictly increasing function of x on the interval $[0, +\infty)$ and

$$0 \leq T_{\alpha}(x) < \frac{\Gamma(1-\alpha)}{\Gamma(\alpha)} \quad \text{for } 0 \leq x < +\infty, \quad (4.13)$$

with

$$\lim_{x \rightarrow +\infty} T_{\alpha}(x) = \frac{\Gamma(1-\alpha)}{\Gamma(\alpha)}, \quad (4.14)$$

since by the results of Taylor and Comstock [7] the parity-condition parameter $Q^* = Q^*(\mu, \nu, C = 0)$ is given by

$$\lim_{t \rightarrow +\infty} T_X(t) = \frac{1}{Q^*(\mu, \nu, 0)} = \left(\frac{\lambda_I}{\mu + \nu + 2} \right)^{2q-1} \frac{\Gamma(p)}{\Gamma(q)}. \quad (4.15)$$

We recall that Taylor and Comstock [7] have introduced the so-called parity-condition parameter Q^* as the value (or range of such values) for the initial condition Q to the initial-value problem

$$\left\{ \begin{array}{l} \frac{dE_X^-}{dt} = -\frac{1}{\sqrt{\lambda_R}} a(t) E_Y^- \quad \text{with } E_X^-(t_0) = 1, \\ \frac{dE_Y^-}{dt} = -\sqrt{\lambda_R} b(t) E_X^- \quad \text{with } E_Y^-(t_0) = Q, \end{array} \right. \quad (4.16)$$

such that $E_X^-(t; Q^*)$ and $E_Y^-(t; Q^*) > 0$ for all $t \geq t_0$. In other words, Q^* is the value of Q in (4.16) above such that neither E_X^- nor E_Y^- ever become zero. In this case, both $E_X^-(t; Q^*)$ and $E_Y^-(t; Q^*)$ are positive, strictly decreasing functions, similar to decreasing exponentials. Thus, we may call Q^* "the Y equivalent of an X force of unit strength," since the forces are "at parity," with neither force being annihilated in finite time. Taylor and Comstock have shown that for either $a(t) \notin L(0, +\infty)$ or $b(t) \notin L(0, +\infty)$, then Q^* is unique and given by

$$\lim_{t \rightarrow +\infty} \frac{S_X(t)}{C_X(t)} = \frac{1}{Q^*}. \quad (4.17)$$

The significance of the parity-condition parameter Q^* is that it allows us to predict force annihilation as the following theorem shows.

THEOREM 1 (Taylor and Comstock [7]): Assume that either $a(t) \notin L(0, +\infty)$ or $b(t) \notin L(0, +\infty)$. Then the X force will be annihilated in finite time if and only if

$$\frac{x_0}{y_0} < \sqrt{\lambda_R} \left\{ \frac{C_X(0) - Q^* S_X(0)}{Q^* C_Y(0) - S_Y(0)} \right\}. \quad (4.18)$$

5. Use of LCS Functions for Analyzing Combat.

The Lanchester-Clifford-Schläfli (LCS) functions $F_\alpha(x)$ and $H_\alpha(x)$ are useful for analyzing "aimed-fire" combat (see Section 3 above) modelled with the power attrition-rate coefficients with "no offset" (3.8), which we rewrite here as

$$a(t) = k_a (t + C)^\mu, \quad \text{and} \quad b(t) = k_b (t + C)^\nu. \quad (5.1)$$

In other words, the LCS functions arise in solving the differential combat model (2.1) with attrition-rate coefficients (5.1). In order that both $a(t)$ and $b(t) \in L(t_0, T)$, we must have μ and $\nu > -1$. Military situations modelled by these equations have been discussed in Section 3 above, e.g. combat between two weapon systems with the *same maximum effective range*. For such combat, the LCS functions may be used to

- (1) compute force-level declines,
 - (2) predict force annihilation,
- and
- (3) predict the time of force annihilation.

Let us now see how the LCS functions may be used to obtain the above information about force-level declines and force-annihilation prediction. According to (2.4), (4.8), and (4.9) above, the X force level is given by

$$x(t) = x_0 \{ F_p(\tau_0) F_q(\tau(t)) - H_q(\tau_0) H_p(\tau(t)) \} \\ - y_0 \sqrt{\lambda_R} \left(\frac{\lambda_I}{\mu + \nu + 2} \right)^{2q-1} \{ F_q(\tau_0) H_p(\tau(t)) - H_p(\tau_0) F_q(\tau(t)) \}, \quad (5.2)$$

where q is given by (3.10), $p = 1 - q$, and $\tau(t)$ is given by (3.11), which we rewrite as

$$\tau(t) = \left(\frac{2\lambda_I}{\mu + \nu + 2} \right) (t + C)^{(\mu + \nu + 2)/2}. \quad (5.3)$$

The time to annihilate the X force* is determined by $x(t_a^X) = 0$, and it follows that

$$T_q(\tau(t_a^X)) = \frac{x_0 F_p(\tau_0) + y_0 \sqrt{\lambda_R} \left(\frac{\lambda_I}{\mu + \nu + 2} \right)^{q-p} H_p(\tau_0)}{x_0 H_q(\tau_0) + y_0 \sqrt{\lambda_R} \left(\frac{\lambda_I}{\mu + \nu + 2} \right)^{q-p} F_q(\tau_0)}, \quad (5.4)$$

where from (4.10)

$$T_q(\tau(t)) = H_p(\tau(t)) / F_q(\tau(t)), \quad (5.5)$$

and we recall that $p + q = 1$. It follows that the time to annihilate X , t_a^X , is given by

* If we multiply the first equation of (2.1) by y , the second by x , add, and integrate, we obtain

$$x(t) y(t) = x_0 y_0 - \int_0^t \{a(s) y^2(s) + b(s) x^2(s)\} ds,$$

which shows that $x(t)$ and $y(t)$ can have at most one finite zero. Hence, if $x(t_a^X) = 0$, then we know that $y(t) > 0$ for all $t \geq 0$.

$$t_a^X = \tau^{-1} \left\{ T_q^{-1} \left[\frac{x_0 F_p(\tau_0) + y_0 \sqrt{\lambda_R} \left(\frac{\lambda_I}{\mu + \nu + 2} \right)^{q-p} H_p(\tau_0)}{x_0 H_q(\tau_0) + y_0 \sqrt{\lambda_R} \left(\frac{\lambda_I}{\mu + \nu + 2} \right)^{q-p} F_q(\tau_0)} \right] \right\} . \quad (5.6)$$

Taylor and Comstock [7] have shown that $T_q(\tau)$ is strictly increasing and satisfies (see also (4.12) above)

$$0 \leq T_q(\tau) < \Gamma(p)/\Gamma(q) , \quad (5.7)$$

where $p = 1-q$. It follows that in order for X to be annihilated in finite time, the right-hand side of (5.4) must be less than $\Gamma(p)/\Gamma(q)$. Let us observe that for $t_0 = -C = 0$, (5.4) simplifies to

$$T_q(\tau(t_a^X)) = \frac{x_0}{y_0 \sqrt{\lambda_R}} \left(\frac{\lambda_I}{\mu + \nu + 2} \right)^{p-q} . \quad (5.8)$$

Thus, we have proved the following theorem concerning force-annihilation prediction.

THEOREM 2: Consider combat between two homogeneous forces modelled by (2.1) with power attrition-rate coefficients (5.1). Assume that μ and $\nu > -1$ and that the above equations hold for all time. Then the X force will be annihilated in finite time if and only if

$$\Gamma(q) \left\{ x_0 F_p(\tau_0) + y_0 \sqrt{\lambda_R} \left(\frac{\lambda_I}{\mu + \nu + 2} \right)^{q-p} H_p(\tau_0) \right\} \\ < \Gamma(p) \left\{ x_0 H_q(\tau_0) + y_0 \sqrt{\lambda_R} \left(\frac{\lambda_I}{\mu + \nu + 2} \right)^{q-p} F_q(\tau_0) \right\}, \quad (5.9)$$

where $q = (\nu + 1)/(\mu + \nu + 2)$ and $p = 1 - q$. For $\tau_0 = 0$ (i.e. $C = 0$ so that $\tau_0 = 0$), X will be annihilated in finite time if and only if

$$\frac{x_0}{y_0} < \frac{\Gamma(p)}{\Gamma(q)} \sqrt{\lambda_R} \left(\frac{\lambda_I}{\mu + \nu + 2} \right)^{q-p}. \quad (5.10)$$

6. Tabulation of LCS Functions.

This report contains the most extensive set of tables of the Lanchester-Clifford-Schläfli functions currently available. The Appendix contains tables of five-decimal-place values of the hyperbolic-like LCS functions $F_\alpha(x)$, $H_{1-\alpha}(x)$, and $T_\alpha(x)$ for various values of the argument x , namely $x = 0.00$ (0.01) 2.00 (0.1) 10.0, and $\alpha = 1/2, 1/3, 2/3, 1/4, 3/4, 1/5, 2/5, 3/5, 4/5, 2/7, 3/7, 4/7, 5/7, 4/9, 5/9, 3/11, 5/11, 6/11, 8/11, 5/13, 8/13, 5/17, 12/17, 5/21, \text{ and } 16/21$. These values of the index α correspond to $\mu, \nu = 0, 1/4, 1/2, 1, 1\frac{1}{2}, 2, \text{ and } 3$ in (3.8) and allow one to analyze, for example, a fairly wide variety of range capabilities for weapon systems in the constant-speed-attack model of Section 3. These

tables have been calculated by the recursive means given in Section 8 of [5]. A less extensive tabulation (namely, for $\alpha = 1/2, 1/3, 2/3, 1/4, 3/4, 1/5, 2/5, 3/5, 4/5, 3/7, \text{ and } 4/7$ corresponding to $\mu, \nu = 0, 1, 2, 3$) is to be found in a companion report [8].

A representative tabulation of the hyperbolic-like LCS functions $F_\alpha(x)$, $H_{1-\alpha}(x)$, and $T_\alpha(x)$ is given in, for example, Tables 8A and 8B of the Appendix for $\alpha = 3/5$. The values of the argument x are the same as those used for the tabulation of the hyperbolic functions by Abramowitz and Stegun [1]. We observe from Table 8B and (4.13) that the limiting value of $T_\alpha(x)$ as $x \rightarrow +\infty$ (here $\alpha = 3/5$) is quickly reached, with three-decimal-place accuracy already attained for $x = 4.5$. Moreover, the use of these tables (specifically, Tables 8A and 8B of the Appendix) for combat analysis is illustrated in the next section.

7. Numerical Examples

In this section we examine a couple of numerical examples to show some of the insights that may be gained into the dynamics of combat between two homogeneous forces from our results (see also [6]). These examples illustrate the use of the LCS functions $F_\alpha(x)$, $H_{1-\alpha}(x)$, and $T_\alpha(x)$ for analyzing "aimed-fire" combat modelled with the power attrition-rate coefficients with "no offset" (5.1). As in [4-7], we consider S. Bonder's model (3.2) for the constant-speed attack against a static defensive position. We will focus on the use of the LCS functions for predicting force annihilation, since the computing of force-level trajectories with Lanchester functions is adequately handled elsewhere (see [4-5]).

Let us accordingly consider the constant-speed attack of a homogeneous Y force against the static defensive position of a homogeneous X force (see Section 3 above for further modelling details, especially Figure 1). For our numerical computations, we assume that the fire effectiveness of the Y weapon system varies linearly with range, i.e.

$$\alpha(r) = \begin{cases} \alpha_0 \left(1 - \frac{r}{R_\alpha}\right) & \text{for } 0 \leq r \leq R_\alpha, \\ 0 & \text{for } R_\alpha \leq r, \end{cases} \quad (7.1)$$

and that the fire effectiveness of the X weapon system varies quadratically with range, i.e.

$$\beta(r) = \begin{cases} \beta_0 \left(1 - \frac{r}{R_\beta}\right)^2 & \text{for } 0 \leq r \leq R_\beta, \\ 0 & \text{for } R_\beta \leq r, \end{cases} \quad (7.2)$$

with $R_\alpha = R_\beta$, i.e. both weapon systems have the same maximum effective range. In other words, $\mu = 1$ in (3.4) and $\nu = 2$ for $\beta(r)$. We consider a battle modelled by the input data given in Table II. In terms of time as the independent variable, the attrition-rate coefficients (7.1) and (7.2) become via (3.3)

$$a(t) = k_a (t + C) \quad \text{and} \quad b(t) = k_b (t + C)^2, \quad (7.3)$$

Table II. Input Data for Numerical Examples

$$\mu = 1, \nu = 2$$

$$\alpha_0 = 0.06 X \text{ casualties/minute/Y firer}$$

$$\beta_0 = 0.6 Y \text{ casualties/minute/X firer}$$

$$R_\alpha = R_\beta = 2000 \text{ meters}$$

$$v = 5 \text{ miles/hour}$$

where $R_\alpha = R_\beta$,

$$C = \frac{R_\alpha - R_0}{v}, \quad k_a = \frac{\alpha_0 v}{R_\alpha}, \quad \text{and} \quad k_b = \beta_0 \left(\frac{v}{R_\beta} \right)^2. \quad (7.4)$$

From the input data given in Table II, we compute the parameter values shown in Table III, since the transformed X force-level equation is given by (3.9) with $q = (v + 1)/(\mu + v + 2)$, $p = 1 - q$, $\mu = 1$, and $v = 2$. Thus, the X force level may be computed with $F_\alpha(\tau)$ and $H_{1-\alpha}(\tau)$ with $\alpha = q = 3/5$. Force-annihilation prediction involves the limiting value of $T_\alpha(\tau) = H_{1-\alpha}(\tau)/F_\alpha(\tau)$ as $\tau \rightarrow +\infty$. From Table 8B of the Appendix and Table III, we note the predicted agreement between $\Gamma(1-\alpha)/\Gamma(\alpha)$ and the limiting value of $T_\alpha(x)$ as $x \rightarrow +\infty$ [recall (4.13)] for $\alpha = q = 3/5$. We now consider two cases: (I) $R_0 = 2000$ meters, and (II) $R_0 = 1250$ meters.

When $R_0 = 2000$ meters (see Figure 3 of [4]), we have $C = 0$ and $\tau_0 = 0$. The maximum time that the battle can last is $t_{\max} = R_0/v = 14.91$ minutes, since at this time the attackers reach their final objective, i.e. the defender's position (again, see Figure 1). We now consider the qualitative behavior of the $\mu = 1$, $v = 2$ force-level trajectory shown in Figure 3 of [4]. Theorem 2 tells us that the X force can be annihilated in finite time if and only if

$$\frac{x_0}{y_0} < \frac{\Gamma(p)}{\Gamma(q)} \sqrt{\lambda_R} \left(\frac{\lambda_I}{\mu + v + 2} \right)^{q-p}, \quad (7.3)$$

where $q = 3/5$ and $p = 1 - q$. Using the numerical values in Table III, we compute from (7.3) that the X force can be annihilated in finite time if and only if

Table III. Parameter Values for Numerical Examples

$$k_a = 4.0233 \times 10^{-3} X \text{ casualties/minute}^\mu / Y \text{ firer}$$

$$k_b = 2.6979 \times 10^{-3} Y \text{ casualties/minute}^\nu / X \text{ firer}$$

$$p = 2/5, \quad q = 3/5$$

$$\Gamma(p)/\Gamma(q) = 1.48951$$

$$A = 0$$

$$\frac{x_0}{y_0} < 0.420 . \quad (7.4)$$

When the X force can be annihilated, its annihilation time is given by (5.8), which we rewrite here as

$$T_q(\tau(t_a^X)) = \frac{x_0}{y_0 \sqrt{\lambda_R}} \left(\frac{\lambda_I}{\mu + \nu + 2} \right)^{p-q} , \quad (7.5)$$

where

$$\tau(t) = \left(\frac{2\lambda_I}{\mu + \nu + 2} \right) t^{(\mu+\nu+2)/2} . \quad (7.6)$$

Thus, for the numerical values given in Table III, the time of annihilation of the X force is given by

$$T_q(\tau(t_a^X)) = 3.544 \frac{x_0}{y_0} , \quad (7.7)$$

with $q = 3/5$. We will now illustrate further computations for $x_0 = 10$ and $y_0 = 30$. From (7.4) we see that the X force can be annihilated in finite time (but we must verify that $t_a^X \leq t_{\max}$). In this case (7.7) becomes

$$T_q(\tau(t_a^X)) = 1.18122 . \quad (7.8)$$

We must now determine $\tau(t_a^X)$ such that $\tau(t_a^X) = T_q^{-1}(1.18122)$ by using interpolation methods and Tables 8A and 8B. From Table 8A, we find

$$T_q(\tau) = 1.18172 \quad \text{for } \tau = 1.01$$

$$T_q(\tau) = 1.17630 \quad \text{for } \tau = 1.00$$

so that using linear interpolation, we obtain

$$\tau(t_a^X) = 1.009, \quad (7.9)$$

whence use of (7.6) yields

$$t_a^X = 14.24 \text{ minutes}, \quad (7.10)$$

which is less than $t_{\max} = 14.91$ minutes so that the defending X force is indeed annihilated before the attacking Y force reaches its final objective.

Since $r(t) = R_0 - vt$, we find that force separation at the instant of annihilation of the X force is

$$r_a^X = 89.8 \text{ meters}. \quad (7.11)$$

Further results may be computed in a similar fashion and are given in Table IV.

When $R_0 = 1250$ meters (see Figure 3 of [5]), we have $C = 5.5923$ minutes, $\tau_0 = 0.0975$, and $t_{\max} = R_0/v = 9.32$ minutes. In this case Theorem 2 tells us that the X force can be annihilated in finite time if and only if

Table IV. Annihilation of the X Force as a Function
of the Initial Force Ratio for $R_0 = 2000$ meters

(x_0/y_0)	t_a^X (minutes)	r_a^X (meters)
0.333	14.24	89.8
0.250	11.61	443.2
0.200	10.19	633.2

$$\frac{x_0}{y_0} < \sqrt{\lambda_R} \left(\frac{\lambda_I}{\mu + \nu + 2} \right)^{q-p} \frac{\Gamma(p)}{\Gamma(q)} \frac{\left\{ F_q(\tau_0) - \frac{\Gamma(q)}{\Gamma(p)} H_p(\tau_0) \right\}}{\left\{ F_p(\tau_0) - \frac{\Gamma(p)}{\Gamma(q)} H_q(\tau_0) \right\}}, \quad (7.12)$$

with $q = 3/5$ and $p = 1-q$. Using linear interpolation, we obtain from Tables 7A and 8A of the Appendix that for the numerical values of Table III

$$F_p(\tau_0) = 1.006, \quad H_q(\tau_0) = 0.044, \quad (7.13)$$

$$F_q(\tau_0) = 1.004, \quad H_p(\tau_0) = 0.223,$$

so that (7.12) says that the X force can be annihilated if and only if

$$\frac{x_0}{y_0} < 0.382. \quad (7.14)$$

When the X force can be annihilated, its annihilation time is given by (5.4), which we rewrite here as

$$T_q(\tau(t_a^X)) = \frac{\left\{ \frac{x_0}{y_0 \sqrt{\lambda_R}} \left(\frac{\lambda_I}{\mu + \nu + 2} \right)^{p-q} F_p(\tau_0) + H_p(\tau_0) \right\}}{\left\{ F_q(\tau_0) + \frac{x_0}{y_0 \sqrt{\lambda_R}} \left(\frac{\lambda_I}{\mu + \nu + 2} \right)^{p-q} H_q(\tau_0) \right\}}, \quad (7.15)$$

whence for the data of Table III

$$T_a(\tau(t_a^X)) = \frac{3.565u_0 + 0.223}{0.156u_0 + 1.004}, \quad (7.16)$$

where $u_0 = x_0/y_0$. Let us also record here that (3.11) yields

$$t = \left(\frac{(\mu + \nu + 2)\tau}{2\lambda_I} \right)^{2/(\mu+\nu+2)} - c. \quad (7.17)$$

We will again illustrate further computations for $x_0 = 10$ and $y_0 = 30$.

From (7.14) we see that the X force can be annihilated in finite time (but again we must investigate whether or not $t_a^X \leq t_{\max}$). In this case (7.16) becomes

$$T_q(\tau(t_a^X)) = 1.33651, \quad (7.18)$$

whence Table 8A of the Appendix and linear interpolation yield

$$\tau(t_a^X) = 1.397, \quad (7.19)$$

so that by (7.17)

$$t_a^X = 10.63 \text{ minutes}. \quad (7.20)$$

Since $t_{\max} = R_0/v = 9.32$ minutes $< t_a^X$, we see that the attacking Y force overruns the defender's position before annihilation of the X force occurs.

Thus, the battle ends with $x_f = x(t_f) > 0$ and $y_f > 0$ at $t_f = t_{\max} =$

9.32 minutes. Corresponding to $t_f = 9.32$ minutes is $\tau_f = 1.1318$, and

then Table 8A of the Appendix yields

$$F_q(\tau_f = 1.1318) = 1.589, \quad H_p(1.1318) = 1.973, \quad (7.21)$$

whence via (2.4), (4.8), (4.9), and (7.13) we obtain

$$x_f = x(t_f) = x(r = 0) = 1.35. \quad (7.22)$$

Some further numerical results are given in Table V. Again, these parametric results should be contrasted with the single $\mu = 1, \nu = 2$ force-level trajectory shown in Figure 3 of [5].

8. Final Remarks

In the previous section above, we have seen how the LCS functions allow one to conveniently obtain much valuable information about the model (2.1) with power attrition-rate coefficients (3.8) without having to explicitly compute the entire force-level trajectories. Previously we were limited to computing only force-level trajectories (see [4-5]). With the availability of these tabulations of LCS functions (see the Appendix of this report and [8]), we can now tell who is going to be annihilated and when this event will happen without having to compute the trajectories. Not only did we answer questions about the qualitative behavior of the model (e.g. force annihilation) for specific values of, for example, initial force levels but also for a range of values of the initial force ratio (i.e. parametric analysis of model behavior).

Table V. Annihilation of the X Force as a Function
of the Initial Force Ratio for $R_0 = 1250$ meters

(x_0/y_0)	t_a^X (minutes)	r_a^X (meters)
0.333	10.63	_____†
0.250	7.56	235.9
0.200	6.17	422.8

† $t_{\max} = 9.32$ minutes and $x_f = x(r=0) = 1.35$.

The results of this report may be used for other parametric analyses, e.g. parametric dependence of battle outcome on attrition-rate coefficients. Thus, the contents of this report allow one to develop important insights into the dynamics of combat between two homogeneous forces with temporal variations in fire effectiveness. With the availability of tabulations of the LCS functions, one can now analyze such combat modelled by the power attrition-rate coefficients (3.8) with somewhat the same facility as he can for the constant-coefficient case and thus aid in parametric analyses. For further discussions of the significance of such results for military operations research, the reader is directed to [6] and [7].

REFERENCES

1. M. ABRAMOWITZ and I. STEGUN (Editors), Handbook of Mathematical Functions, National Bureau of Standards Applied Mathematics Series, No. 55, Washington, D.C., 1964.
2. K. KNOPP, Infinite Sequences and Series, Dover, New York, 1956.
3. F. W. LANCHESTER, "Aircraft in Warfare: The Dawn of the Fourth Arm-
No. V., The Principle of Concentration," Engineering 98, 422-423 (1914)
(reprinted on pp. 2138-2148 of The World of Mathematics, J. Newman
(Editor), Simon and Schuster, New York, 1956).
4. J. G. TAYLOR, "Solving Lanchester-Type Equations for 'Modern Warfare'
with Variable Coefficients," Opns. Res. 22, 756-770 (1974).
5. J. G. TAYLOR and G. G. BROWN, "Canonical Methods in the Solution of
Variable-Coefficient Lanchester-Type Equations of Modern Warfare,"
Opns. Res. 24, 44-69 (1976).
6. J. G. TAYLOR and G. G. BROWN, "Further Canonical Methods in the
Solution of Variable-Coefficient Lanchester-Type Equations of Modern
Warfare," NPS55-77-27, Naval Postgraduate School, Monterey, California,
June 1977.
7. J. G. TAYLOR and C. COMSTOCK, "Force-Annihilation Conditions for
Variable-Coefficient Lanchester-Type Equations of Modern Warfare,"
Naval Res. Log. Quart. 24, 349-371 (1977).
8. J. G. TAYLOR and G. G. BROWN, "A Short Table of Lanchester-Clifford-
Schläfli Functions," NPS55-77-42, Naval Postgraduate School, Monterey,
California, October 1977.

APPENDIX: Tabulation of the LCS Functions $F_\alpha(x)$, $H_{1-\alpha}(x)$, and $T_\alpha(x)$ for
 $\alpha = 1/2, 1/3, 2/3, 1/4, 3/4, 1/5, 2/5, 3/5, 4/5, 2/7, 3/7,$
 $4/7, 5/7, 4/9, 5/9, 3/11, 5/11, 6/11, 8/11, 5/13, 8/13,$
 $5/17, 12/17, 5/21, \text{ and } 16/21.$

$\alpha = 1/2$

x	F _{1/2} (x)	H _{1/2} (x)	T _{1/2} (x)	x	F _{1/2} (x)	H _{1/2} (x)	T _{1/2} (x)	x	F _{1/2} (x)	H _{1/2} (x)	T _{1/2} (x)
1.0000	1.0000	1.0000	0.0000	2.0	3.74231	3.40486	0.9903	6.0	201.71044	202.71374	0.99999
1.0001	1.0001	1.0001	0.0000	2.1	4.14911	4.01711	0.9903	6.1	219.23534	220.23864	0.99999
1.0002	1.0002	1.0002	0.0000	2.2	4.55591	4.42391	0.9903	6.2	236.76034	237.76364	0.99999
1.0003	1.0003	1.0003	0.0000	2.3	4.96271	4.83071	0.9903	6.3	254.28534	255.28864	0.99999
1.0004	1.0004	1.0004	0.0000	2.4	5.36951	5.23751	0.9903	6.4	271.81034	272.81364	0.99999
1.0005	1.0005	1.0005	0.0000	2.5	5.77631	5.64431	0.9903	6.5	289.33534	290.33864	0.99999
1.0006	1.0006	1.0006	0.0000	2.6	6.18311	6.05111	0.9903	6.6	306.86034	307.86364	0.99999
1.0007	1.0007	1.0007	0.0000	2.7	6.58991	6.45791	0.9903	6.7	324.38534	325.38864	0.99999
1.0008	1.0008	1.0008	0.0000	2.8	6.99671	6.86471	0.9903	6.8	341.91034	342.91364	0.99999
1.0009	1.0009	1.0009	0.0000	2.9	7.40351	7.27151	0.9903	6.9	359.43534	360.43864	0.99999
1.0010	1.0010	1.0010	0.0000	3.0	7.81031	7.67831	0.9903	7.0	376.96034	377.96364	0.99999
1.0011	1.0011	1.0011	0.0000	3.1	8.21711	8.08511	0.9903	7.1	394.48534	395.48864	0.99999
1.0012	1.0012	1.0012	0.0000	3.2	8.62391	8.49191	0.9903	7.2	412.01034	413.01364	0.99999
1.0013	1.0013	1.0013	0.0000	3.3	9.03071	8.89871	0.9903	7.3	429.53534	430.53864	0.99999
1.0014	1.0014	1.0014	0.0000	3.4	9.43751	9.30551	0.9903	7.4	447.06034	448.06364	0.99999
1.0015	1.0015	1.0015	0.0000	3.5	9.84431	9.71231	0.9903	7.5	464.58534	465.58864	0.99999
1.0016	1.0016	1.0016	0.0000	3.6	10.25111	10.11911	0.9903	7.6	482.11034	483.11364	0.99999
1.0017	1.0017	1.0017	0.0000	3.7	10.65791	10.52591	0.9903	7.7	499.63534	500.63864	0.99999
1.0018	1.0018	1.0018	0.0000	3.8	11.06471	10.93271	0.9903	7.8	517.16034	518.16364	0.99999
1.0019	1.0019	1.0019	0.0000	3.9	11.47151	11.33951	0.9903	7.9	534.68534	535.68864	0.99999
1.0020	1.0020	1.0020	0.0000	4.0	11.87831	11.74631	0.9903	8.0	552.21034	553.21364	0.99999
1.0021	1.0021	1.0021	0.0000	4.1	12.28511	12.15311	0.9903	8.1	569.73534	570.73864	0.99999
1.0022	1.0022	1.0022	0.0000	4.2	12.69191	12.55991	0.9903	8.2	587.26034	588.26364	0.99999
1.0023	1.0023	1.0023	0.0000	4.3	13.09871	12.96671	0.9903	8.3	604.78534	605.78864	0.99999
1.0024	1.0024	1.0024	0.0000	4.4	13.50551	13.37351	0.9903	8.4	622.31034	623.31364	0.99999
1.0025	1.0025	1.0025	0.0000	4.5	13.91231	13.78031	0.9903	8.5	639.83534	640.83864	0.99999
1.0026	1.0026	1.0026	0.0000	4.6	14.31911	14.18711	0.9903	8.6	657.36034	658.36364	0.99999
1.0027	1.0027	1.0027	0.0000	4.7	14.72591	14.59391	0.9903	8.7	674.88534	675.88864	0.99999
1.0028	1.0028	1.0028	0.0000	4.8	15.13271	15.00071	0.9903	8.8	692.41034	693.41364	0.99999
1.0029	1.0029	1.0029	0.0000	4.9	15.53951	15.40751	0.9903	8.9	709.93534	710.93864	0.99999
1.0030	1.0030	1.0030	0.0000	5.0	15.94631	15.81431	0.9903	9.0	727.46034	728.46364	0.99999
1.0031	1.0031	1.0031	0.0000	5.1	16.35311	16.22111	0.9903	9.1	744.98534	745.98864	0.99999
1.0032	1.0032	1.0032	0.0000	5.2	16.75991	16.62791	0.9903	9.2	762.51034	763.51364	0.99999
1.0033	1.0033	1.0033	0.0000	5.3	17.16671	17.03471	0.9903	9.3	780.03534	781.03864	0.99999
1.0034	1.0034	1.0034	0.0000	5.4	17.57351	17.44151	0.9903	9.4	797.56034	798.56364	0.99999
1.0035	1.0035	1.0035	0.0000	5.5	17.98031	17.84831	0.9903	9.5	815.08534	816.08864	0.99999
1.0036	1.0036	1.0036	0.0000	5.6	18.38711	18.25511	0.9903	9.6	832.61034	833.61364	0.99999
1.0037	1.0037	1.0037	0.0000	5.7	18.79391	18.66191	0.9903	9.7	850.13534	851.13864	0.99999
1.0038	1.0038	1.0038	0.0000	5.8	19.20071	19.06871	0.9903	9.8	867.66034	868.66364	0.99999
1.0039	1.0039	1.0039	0.0000	5.9	19.60751	19.47551	0.9903	9.9	885.18534	886.18864	0.99999
1.0040	1.0040	1.0040	0.0000	6.0	20.01431	19.88231	0.9903	10.0	902.71034	903.71364	0.99999

TABLE 1B. Lanchester-Clifford-Schlafli Functions $F_\alpha(x)$, $H_{1-\alpha}(x)$, and

$T_\alpha(x)$ for $\alpha = 1/2$ and x from 1.50 to 10.0.

$\alpha = 2/3$

x	$F_{2/3}(x)$	$H_{1/3}(x)$	$T_{2/3}(x)$	x	$F_{2/3}(x)$	$H_{1/3}(x)$	$T_{2/3}(x)$	x	$F_{2/3}(x)$	$H_{1/3}(x)$	$T_{2/3}(x)$
0.0000	1.0000	0.0000	0.0000	0.5000	1.0000	1.2403	1.1817				
0.0005	1.0001	0.0001	0.0001	0.5005	1.0002	1.2404	1.1818				
0.0010	1.0002	0.0002	0.0002	0.5010	1.0004	1.2405	1.1819				
0.0015	1.0003	0.0003	0.0003	0.5015	1.0006	1.2406	1.1820				
0.0020	1.0004	0.0004	0.0004	0.5020	1.0008	1.2407	1.1821				
0.0025	1.0005	0.0005	0.0005	0.5025	1.0010	1.2408	1.1822				
0.0030	1.0006	0.0006	0.0006	0.5030	1.0012	1.2409	1.1823				
0.0035	1.0007	0.0007	0.0007	0.5035	1.0014	1.2410	1.1824				
0.0040	1.0008	0.0008	0.0008	0.5040	1.0016	1.2411	1.1825				
0.0045	1.0009	0.0009	0.0009	0.5045	1.0018	1.2412	1.1826				
0.0050	1.0010	0.0010	0.0010	0.5050	1.0020	1.2413	1.1827				
0.0055	1.0011	0.0011	0.0011	0.5055	1.0022	1.2414	1.1828				
0.0060	1.0012	0.0012	0.0012	0.5060	1.0024	1.2415	1.1829				
0.0065	1.0013	0.0013	0.0013	0.5065	1.0026	1.2416	1.1830				
0.0070	1.0014	0.0014	0.0014	0.5070	1.0028	1.2417	1.1831				
0.0075	1.0015	0.0015	0.0015	0.5075	1.0030	1.2418	1.1832				
0.0080	1.0016	0.0016	0.0016	0.5080	1.0032	1.2419	1.1833				
0.0085	1.0017	0.0017	0.0017	0.5085	1.0034	1.2420	1.1834				
0.0090	1.0018	0.0018	0.0018	0.5090	1.0036	1.2421	1.1835				
0.0095	1.0019	0.0019	0.0019	0.5095	1.0038	1.2422	1.1836				
0.0100	1.0020	0.0020	0.0020	0.5100	1.0040	1.2423	1.1837				
0.0105	1.0021	0.0021	0.0021	0.5105	1.0042	1.2424	1.1838				
0.0110	1.0022	0.0022	0.0022	0.5110	1.0044	1.2425	1.1839				
0.0115	1.0023	0.0023	0.0023	0.5115	1.0046	1.2426	1.1840				
0.0120	1.0024	0.0024	0.0024	0.5120	1.0048	1.2427	1.1841				
0.0125	1.0025	0.0025	0.0025	0.5125	1.0050	1.2428	1.1842				
0.0130	1.0026	0.0026	0.0026	0.5130	1.0052	1.2429	1.1843				
0.0135	1.0027	0.0027	0.0027	0.5135	1.0054	1.2430	1.1844				
0.0140	1.0028	0.0028	0.0028	0.5140	1.0056	1.2431	1.1845				
0.0145	1.0029	0.0029	0.0029	0.5145	1.0058	1.2432	1.1846				
0.0150	1.0030	0.0030	0.0030	0.5150	1.0060	1.2433	1.1847				
0.0155	1.0031	0.0031	0.0031	0.5155	1.0062	1.2434	1.1848				
0.0160	1.0032	0.0032	0.0032	0.5160	1.0064	1.2435	1.1849				
0.0165	1.0033	0.0033	0.0033	0.5165	1.0066	1.2436	1.1850				
0.0170	1.0034	0.0034	0.0034	0.5170	1.0068	1.2437	1.1851				
0.0175	1.0035	0.0035	0.0035	0.5175	1.0070	1.2438	1.1852				
0.0180	1.0036	0.0036	0.0036	0.5180	1.0072	1.2439	1.1853				
0.0185	1.0037	0.0037	0.0037	0.5185	1.0074	1.2440	1.1854				
0.0190	1.0038	0.0038	0.0038	0.5190	1.0076	1.2441	1.1855				
0.0195	1.0039	0.0039	0.0039	0.5195	1.0078	1.2442	1.1856				
0.0200	1.0040	0.0040	0.0040	0.5200	1.0080	1.2443	1.1857				
0.0205	1.0041	0.0041	0.0041	0.5205	1.0082	1.2444	1.1858				
0.0210	1.0042	0.0042	0.0042	0.5210	1.0084	1.2445	1.1859				
0.0215	1.0043	0.0043	0.0043	0.5215	1.0086	1.2446	1.1860				
0.0220	1.0044	0.0044	0.0044	0.5220	1.0088	1.2447	1.1861				
0.0225	1.0045	0.0045	0.0045	0.5225	1.0090	1.2448	1.1862				
0.0230	1.0046	0.0046	0.0046	0.5230	1.0092	1.2449	1.1863				
0.0235	1.0047	0.0047	0.0047	0.5235	1.0094	1.2450	1.1864				
0.0240	1.0048	0.0048	0.0048	0.5240	1.0096	1.2451	1.1865				
0.0245	1.0049	0.0049	0.0049	0.5245	1.0098	1.2452	1.1866				
0.0250	1.0050	0.0050	0.0050	0.5250	1.0100	1.2453	1.1867				
0.0255	1.0051	0.0051	0.0051	0.5255	1.0102	1.2454	1.1868				
0.0260	1.0052	0.0052	0.0052	0.5260	1.0104	1.2455	1.1869				
0.0265	1.0053	0.0053	0.0053	0.5265	1.0106	1.2456	1.1870				
0.0270	1.0054	0.0054	0.0054	0.5270	1.0108	1.2457	1.1871				
0.0275	1.0055	0.0055	0.0055	0.5275	1.0110	1.2458	1.1872				
0.0280	1.0056	0.0056	0.0056	0.5280	1.0112	1.2459	1.1873				
0.0285	1.0057	0.0057	0.0057	0.5285	1.0114	1.2460	1.1874				
0.0290	1.0058	0.0058	0.0058	0.5290	1.0116	1.2461	1.1875				
0.0295	1.0059	0.0059	0.0059	0.5295	1.0118	1.2462	1.1876				
0.0300	1.0060	0.0060	0.0060	0.5300	1.0120	1.2463	1.1877				
0.0305	1.0061	0.0061	0.0061	0.5305	1.0122	1.2464	1.1878				
0.0310	1.0062	0.0062	0.0062	0.5310	1.0124	1.2465	1.1879				
0.0315	1.0063	0.0063	0.0063	0.5315	1.0126	1.2466	1.1880				
0.0320	1.0064	0.0064	0.0064	0.5320	1.0128	1.2467	1.1881				
0.0325	1.0065	0.0065	0.0065	0.5325	1.0130	1.2468	1.1882				
0.0330	1.0066	0.0066	0.0066	0.5330	1.0132	1.2469	1.1883				
0.0335	1.0067	0.0067	0.0067	0.5335	1.0134	1.2470	1.1884				
0.0340	1.0068	0.0068	0.0068	0.5340	1.0136	1.2471	1.1885				
0.0345	1.0069	0.0069	0.0069	0.5345	1.0138	1.2472	1.1886				
0.0350	1.0070	0.0070	0.0070	0.5350	1.0140	1.2473	1.1887				
0.0355	1.0071	0.0071	0.0071	0.5355	1.0142	1.2474	1.1888				
0.0360	1.0072	0.0072	0.0072	0.5360	1.0144	1.2475	1.1889				
0.0365	1.0073	0.0073	0.0073	0.5365	1.0146	1.2476	1.1890				
0.0370	1.0074	0.0074	0.0074	0.5370	1.0148	1.2477	1.1891				
0.0375	1.0075	0.0075	0.0075	0.5375	1.0150	1.2478	1.1892				
0.0380	1.0076	0.0076	0.0076	0.5380	1.0152	1.2479	1.1893				
0.0385	1.0077	0.0077	0.0077	0.5385	1.0154	1.2480	1.1894				
0.0390	1.0078	0.0078	0.0078	0.5390	1.0156	1.2481	1.1895				
0.0395	1.0079	0.0079	0.0079	0.5395	1.0158	1.2482	1.1896				
0.0400	1.0080	0.0080	0.0080	0.5400	1.0160	1.2483	1.1897				
0.0405	1.0081	0.0081	0.0081	0.5405	1.0162	1.2484	1.1898				
0.0410	1.0082	0.0082	0.0082	0.5410	1.0164	1.2485	1.1899				
0.0415	1.0083	0.0083	0.0083	0.5415	1.0166	1.2486	1.1900				
0.0420	1.0084	0.0084	0.0084	0.5420	1.0168	1.2487	1.1901				
0.0425	1.0085	0.0085	0.0085	0.5425	1.0170	1.2488	1.1902				
0.0430	1.0086	0.0086	0.0086	0.5430	1.0172	1.2489	1.1903				
0.0435	1.0087	0.0087	0.0087	0.5435	1.0174	1.2490	1.1904				
0.0440	1.0088	0.0088	0.0088	0.5440	1.0176	1.2491	1.1905				
0.0445	1.0089	0.0089	0.0089	0.5445	1.0178	1.2492	1.1906				
0.0450	1.0090	0.0090	0.0090	0.5450	1.0180	1.2493	1.1907				
0.0455	1.0091	0.0091	0.0091	0.5455	1.0182	1.2494	1.1908				
0.0460	1.0092	0.0092	0.0092	0.5460	1.0184	1.2495	1.1909				
0.0465	1.0093	0.0093	0.0093	0.5465	1.0186	1.2496	1.1910				
0.0470	1.0094	0.0094	0.0094	0.5470	1.0188	1.2497	1.1911				
0.0475	1.0095	0.0095	0.0095	0.5475	1.0190	1.2498	1.1912				
0.0480	1.0096	0.0096	0.0096	0.5480	1.0192	1.2499	1.1913				
0.0485	1.0097	0.0097	0.0097	0.5485	1.0194	1.2500	1.1914				
0.0490	1.0098	0.0098	0.0098	0.5490	1.0196	1.2501	1.1915				
0.0495	1.0099	0.0099	0.0099	0.5495	1.0198	1.2502	1.1916				
0.0500	1.0100	0.0100	0.0100	0.5500	1.0200	1.2503	1.1917				
0.0505	1.0101	0.0101	0.0101	0.5505	1.0202	1.2504	1.1918				
0.0510	1.0102	0.0102	0.0102	0.5510	1.0204	1.2505	1.1919				
0.0515	1.0103	0.0103	0.0103	0.5515	1.0206	1.2506	1.1920				
0.0520	1.0104	0.0104	0.0104	0.5520	1.0208	1.2507	1.1921				
0.0525	1.0105	0.0105	0.0105	0.5525	1.0210	1.2508	1.1922				
0.0530	1.0106	0.0106	0.0106	0.5530	1.0212	1.2509	1.1923				
0.0535	1.0107	0.0107	0.0107	0.5535	1.0214	1.2510	1.1924				
0.0540	1.0108	0.0108	0.0108	0.5540	1.0216	1.2511	1.1925				
0.0545	1.0109	0.0109	0.0109	0.5545	1.0218	1.2512	1.1926				
0.0550	1.0110	0.0110	0.0110	0.5550	1.0220	1.2513	1.1927				
0.0555	1.0111	0.0111	0.0111	0.5555	1.0222	1.2514	1.1928				
0.0560	1.0112	0.0112	0.0112	0.5560	1.0224	1.2515	1.1929				
0.0565	1.0113	0.0113	0.0113	0.5565	1.0226	1.2516	1.1930				
0.0570	1.0114	0.0114	0.0114	0.5570	1.0228	1.2517	1.1931				
0.0575	1.0115	0.0115	0.0115	0.5575	1.0230	1.2518	1.1932				
0.0580	1.0116	0.0116	0.0116	0.5580	1.0232	1.2519	1.1933				
0.0585	1.0117	0.0117	0.0117	0.5585	1.0234	1.2520	1.1934				
0.0590	1.0118	0.0118	0.0118	0.5590	1.0236	1.2521	1.1935				
0.0595	1.0119	0.0119	0.0119	0.5595	1.0238	1.2522	1.1936				
0.0600	1.0120	0.0120	0.0120	0.5600	1.0240	1.2523	1.1937				
0.0605	1.0121	0.0121	0.0121	0.5605	1.0242	1.2524	1.1938				
0.0610	1.0122	0.0122	0.0122	0.5610	1.0244	1.2525	1.1939				
0.0615	1.0123	0.0123	0.0123	0.5615	1.0246	1.2526	1.1940				
0.0620	1.0124	0.0124	0.0124	0.5620	1.0248	1.2527	1.1941				
0.0625	1.0125	0.0125	0.0125	0.5625	1.0250	1.2528	1.1942				
0.0630	1.0126	0.0126	0.0126	0.5630	1.0252	1.2529	1.1943				
0.0635	1.0127	0.0127	0.0127	0.5635	1.0254	1.2530	1.1944				
0.0640	1.0128	0.0128	0.0128	0.5640	1.0256	1.2531	1.1945				
0.0645	1.0129	0.0129	0.0129	0.5645	1.0258	1.2532	1.1946				
0.0650	1.01										

$\alpha = 1/4$

x	$F_{1/4}(x)$	$H_{3/4}(x)$	$T_{1/4}(x)$	x	$F_{1/4}(x)$	$H_{3/4}(x)$	$T_{1/4}(x)$	x	$F_{1/4}(x)$	$H_{3/4}(x)$	$T_{1/4}(x)$
0.0000	1.00000	0.00000	0.00000	0.5000	1.33000	0.00000	0.16667				
0.0001	1.00000	0.00000	0.00000	0.5001	1.33000	0.00000	0.16667				
0.0002	1.00000	0.00000	0.00000	0.5002	1.33000	0.00000	0.16667				
0.0003	1.00000	0.00000	0.00000	0.5003	1.33000	0.00000	0.16667				
0.0004	1.00000	0.00000	0.00000	0.5004	1.33000	0.00000	0.16667				
0.0005	1.00000	0.00000	0.00000	0.5005	1.33000	0.00000	0.16667				
0.0006	1.00000	0.00000	0.00000	0.5006	1.33000	0.00000	0.16667				
0.0007	1.00000	0.00000	0.00000	0.5007	1.33000	0.00000	0.16667				
0.0008	1.00000	0.00000	0.00000	0.5008	1.33000	0.00000	0.16667				
0.0009	1.00000	0.00000	0.00000	0.5009	1.33000	0.00000	0.16667				
0.0010	1.00000	0.00000	0.00000	0.5010	1.33000	0.00000	0.16667				
0.0011	1.00000	0.00000	0.00000	0.5011	1.33000	0.00000	0.16667				
0.0012	1.00000	0.00000	0.00000	0.5012	1.33000	0.00000	0.16667				
0.0013	1.00000	0.00000	0.00000	0.5013	1.33000	0.00000	0.16667				
0.0014	1.00000	0.00000	0.00000	0.5014	1.33000	0.00000	0.16667				
0.0015	1.00000	0.00000	0.00000	0.5015	1.33000	0.00000	0.16667				
0.0016	1.00000	0.00000	0.00000	0.5016	1.33000	0.00000	0.16667				
0.0017	1.00000	0.00000	0.00000	0.5017	1.33000	0.00000	0.16667				
0.0018	1.00000	0.00000	0.00000	0.5018	1.33000	0.00000	0.16667				
0.0019	1.00000	0.00000	0.00000	0.5019	1.33000	0.00000	0.16667				
0.0020	1.00000	0.00000	0.00000	0.5020	1.33000	0.00000	0.16667				
0.0021	1.00000	0.00000	0.00000	0.5021	1.33000	0.00000	0.16667				
0.0022	1.00000	0.00000	0.00000	0.5022	1.33000	0.00000	0.16667				
0.0023	1.00000	0.00000	0.00000	0.5023	1.33000	0.00000	0.16667				
0.0024	1.00000	0.00000	0.00000	0.5024	1.33000	0.00000	0.16667				
0.0025	1.00000	0.00000	0.00000	0.5025	1.33000	0.00000	0.16667				
0.0026	1.00000	0.00000	0.00000	0.5026	1.33000	0.00000	0.16667				
0.0027	1.00000	0.00000	0.00000	0.5027	1.33000	0.00000	0.16667				
0.0028	1.00000	0.00000	0.00000	0.5028	1.33000	0.00000	0.16667				
0.0029	1.00000	0.00000	0.00000	0.5029	1.33000	0.00000	0.16667				
0.0030	1.00000	0.00000	0.00000	0.5030	1.33000	0.00000	0.16667				
0.0031	1.00000	0.00000	0.00000	0.5031	1.33000	0.00000	0.16667				
0.0032	1.00000	0.00000	0.00000	0.5032	1.33000	0.00000	0.16667				
0.0033	1.00000	0.00000	0.00000	0.5033	1.33000	0.00000	0.16667				
0.0034	1.00000	0.00000	0.00000	0.5034	1.33000	0.00000	0.16667				
0.0035	1.00000	0.00000	0.00000	0.5035	1.33000	0.00000	0.16667				
0.0036	1.00000	0.00000	0.00000	0.5036	1.33000	0.00000	0.16667				
0.0037	1.00000	0.00000	0.00000	0.5037	1.33000	0.00000	0.16667				
0.0038	1.00000	0.00000	0.00000	0.5038	1.33000	0.00000	0.16667				
0.0039	1.00000	0.00000	0.00000	0.5039	1.33000	0.00000	0.16667				
0.0040	1.00000	0.00000	0.00000	0.5040	1.33000	0.00000	0.16667				
0.0041	1.00000	0.00000	0.00000	0.5041	1.33000	0.00000	0.16667				
0.0042	1.00000	0.00000	0.00000	0.5042	1.33000	0.00000	0.16667				
0.0043	1.00000	0.00000	0.00000	0.5043	1.33000	0.00000	0.16667				
0.0044	1.00000	0.00000	0.00000	0.5044	1.33000	0.00000	0.16667				
0.0045	1.00000	0.00000	0.00000	0.5045	1.33000	0.00000	0.16667				
0.0046	1.00000	0.00000	0.00000	0.5046	1.33000	0.00000	0.16667				
0.0047	1.00000	0.00000	0.00000	0.5047	1.33000	0.00000	0.16667				
0.0048	1.00000	0.00000	0.00000	0.5048	1.33000	0.00000	0.16667				
0.0049	1.00000	0.00000	0.00000	0.5049	1.33000	0.00000	0.16667				
0.0050	1.00000	0.00000	0.00000	0.5050	1.33000	0.00000	0.16667				

TABLE 4A. Lanchester-Clifford-Schliffli Functions $F_{\alpha}(x)$, $H_{1-\alpha}(x)$, and $T_{\alpha}(x)$ for $\alpha = 1/4$ and x from 0.00 to 1.50.

$\alpha = 1/4$

x	$F_{1/4}(x)$	$H_{3/4}(x)$	$T_{1/4}(x)$	x	$F_{1/4}(x)$	$H_{3/4}(x)$	$T_{1/4}(x)$	x	$F_{1/4}(x)$	$H_{3/4}(x)$	$T_{1/4}(x)$
1.0	1.00000	1.17412	0.30901	6.0	0.00000	3.44935	0.37770				
1.1	1.00000	1.17022	0.31049	6.1	0.00000	3.43925	0.37762				
1.2	1.00000	1.16632	0.31197	6.2	0.00000	3.42915	0.37754				
1.3	1.00000	1.16242	0.31345	6.3	0.00000	3.41905	0.37746				
1.4	1.00000	1.15852	0.31493	6.4	0.00000	3.40895	0.37738				
1.5	1.00000	1.15462	0.31641	6.5	0.00000	3.39885	0.37730				
1.6	1.00000	1.15072	0.31789	6.6	0.00000	3.38875	0.37722				
1.7	1.00000	1.14682	0.31937	6.7	0.00000	3.37865	0.37714				
1.8	1.00000	1.14292	0.32085	6.8	0.00000	3.36855	0.37706				
1.9	1.00000	1.13902	0.32233	6.9	0.00000	3.35845	0.37698				
2.0	1.00000	1.13512	0.32381	7.0	0.00000	3.34835	0.37690				
2.1	1.00000	1.13122	0.32529	7.1	0.00000	3.33825	0.37682				
2.2	1.00000	1.12732	0.32677	7.2	0.00000	3.32815	0.37674				
2.3	1.00000	1.12342	0.32825	7.3	0.00000	3.31805	0.37666				
2.4	1.00000	1.11952	0.32973	7.4	0.00000	3.30795	0.37658				
2.5	1.00000	1.11562	0.33121	7.5	0.00000	3.29785	0.37650				
2.6	1.00000	1.11172	0.33269	7.6	0.00000	3.28775	0.37642				
2.7	1.00000	1.10782	0.33417	7.7	0.00000	3.27765	0.37634				
2.8	1.00000	1.10392	0.33565	7.8	0.00000	3.26755	0.37626				
2.9	1.00000	1.09999	0.33713	7.9	0.00000	3.25745	0.37618				
3.0	1.00000	1.09606	0.33861	8.0	0.00000	3.24735	0.37610				
3.1	1.00000	1.09213	0.34009	8.1	0.00000	3.23725	0.37602				
3.2	1.00000	1.08820	0.34157	8.2	0.00000	3.22715	0.37594				
3.3	1.00000	1.08427	0.34305	8.3	0.00000	3.21705	0.37586				
3.4	1.00000	1.08034	0.34453	8.4	0.00000	3.20695	0.37578				
3.5	1.00000	1.07641	0.34601	8.5	0.00000	3.19685	0.37570				
3.6	1.00000	1.07248	0.34749	8.6	0.00000	3.18675	0.37562				
3.7	1.00000	1.06855	0.34897	8.7	0.00000	3.17665	0.37554				
3.8	1.00000	1.06462	0.35045	8.8	0.00000	3.16655	0.37546				
3.9	1.00000	1.06069	0.35193	8.9	0.00000	3.15645	0.37538				
4.0	1.00000	1.05676	0.35341	9.0	0.00000	3.14635	0.37530				
4.1	1.00000	1.05283	0.35489	9.1	0.00000	3.13625	0.37522				
4.2	1.00000	1.04890	0.35637	9.2	0.00000	3.12615	0.37514				
4.3	1.00000	1.04497	0.35785	9.3	0.00000	3.11605	0.37506				
4.4	1.00000	1.04104	0.35933	9.4	0.00000	3.10595	0.37498				
4.5	1.00000	1.03711	0.36081	9.5	0.00000	3.09585	0.37490				
4.6	1.00000	1.03318	0.36229	9.6	0.00000	3.08575	0.37482				
4.7	1.00000	1.02925	0.36377	9.7	0.00000	3.07565	0.37474				
4.8	1.00000	1.02532	0.36525	9.8	0.00000	3.06555	0.37466				
4.9	1.00000	1.02139	0.36673	9.9	0.00000	3.05545	0.37458				
5.0	1.00000	1.01746	0.36821	10.0	0.00000	3.04535	0.37450				
5.1	1.00000	1.01353	0.36969	10.1	0.00000	3.03525	0.37442				
5.2	1.00000	1.00960	0.37117	10.2	0.00000	3.02515	0.37434				
5.3	1.00000	1.00567	0.37265	10.3	0.00000	3.01505	0.37426				
5.4	1.00000	1.00174	0.37413	10.4	0.00000	3.00495	0.37418				
5.5	1.00000	0.99781	0.37561	10.5	0.00000	2.99485	0.37410				
5.6	1.00000	0.99388	0.37709	10.6	0.00000	2.98475	0.37402				
5.7	1.00000	0.98995	0.37857	10.7	0.00000	2.97465	0.37394				
5.8	1.00000	0.98602	0.38005	10.8	0.00000	2.96455	0.37386				
5.9	1.00000	0.98209	0.38153	10.9	0.00000	2.95445	0.37378				
6.0	1.00000	0.97816	0.38301	11.0	0.00000	2.94435	0.37370				
6.1	1.00000	0.97423	0.38449	11.1	0.00000	2.93425	0.37362				
6.2	1.00000	0.97030	0.38597	11.2	0.00000	2.92415	0.37354				
6.3	1.00000	0.96637	0.38745	11.3	0.00000	2.91405	0.37346				
6.4	1.00000	0.96244	0.38893	11.4	0.00000	2.90395	0.37338				
6.5	1.00000	0.95851	0.39041	11.5	0.00000	2.89385	0.37330				
6.6	1.00000	0.95458	0.39189	11.6	0.00000	2.88375	0.37322				
6.7	1.00000	0.95065	0.39337	11.7	0.00000	2.87365	0.37314				
6.8	1.00000	0.94672	0.39485	11.8	0.00000	2.86355	0.37306				
6.9	1.00000	0.94279	0.39633	11.9	0.00000	2.85345	0.37298				
7.0	1.00000	0.93886	0.39781	12.0	0.00000	2.84335	0.37290				
7.1	1.00000	0.93493	0.39929	12.1	0.00000	2.83325	0.37282				
7.2	1.00000	0.93100	0.40077	12.2	0.00000	2.82315	0.37274				
7.3	1.00000	0.92707	0.40225	12.3	0.00000	2.81305	0.37266				
7.4	1.00000	0.92314	0.40373	12.4	0.00000	2.80295	0.37258				
7.5	1.00000	0.91921	0.40521	12.5	0.00000	2.79285	0.37250				
7.6	1.00000	0.91528	0.40669	12.6	0.00000	2.78275	0.37242				
7.7	1.00000	0.91135	0.40817	12.7	0.00000	2.77265	0.37234				
7.8	1.00000	0.90742	0.40965	12.8	0.00000	2.76255	0.37226				
7.9	1.00000	0.90349	0.41113	12.9	0.00000	2.75245	0.37218				
8.0	1.00000	0.89956	0.41261	13.0	0.00000	2.74235	0.37210				
8.1	1.00000	0.89563	0.41409	13.1	0.00000	2.73225	0.37202				
8.2	1.00000	0.89170	0.41557	13.2	0.00000	2.72215	0.37194				
8.3	1.00000	0.88777	0.41705	13.3	0.00000	2.71205	0.37186				
8.4	1.00000	0.88384	0.41853	13.4	0.00000	2.70195	0.37178				
8.5	1.00000	0.87991	0.42001	13.5	0.00000	2.69185	0.37170				
8.6	1.00000	0.87598	0.42149	13.6	0.00000	2.68175	0.37162				
8.7	1.00000	0.87205	0.42297	13.7	0.00000	2.67165	0.37154				
8.8	1.00000	0.86812	0.42445	13.8	0.00000	2.66155	0.37146				
8.9	1.00000	0.86419	0.42593	13.9	0.00000	2.65145	0.37138				
9.0	1.00000	0.86026	0.42741	14.0	0.00000	2.64135	0.37130				
9.1	1.00000	0.85633	0.42889	14.1	0.00000	2.63125	0.37122				
9.2	1.00000	0.85240	0.43037	14.2	0.00000	2.62115	0.37114				
9.3	1.00000	0.84847	0.43185	14.3	0.00000	2.61105	0.37106				
9.4	1.00000	0.84454	0.43333	14.4	0.00000	2.60095	0.37098				
9.5	1.00000	0.84061	0.43481	14.5	0.00000	2.59085	0.37090				
9.6	1.00000	0.83668	0.43629	14.6	0.00000	2.58075	0.37082				
9.7	1.00000	0.83275	0.43777	14.7	0.00000	2.57065	0.37074				
9.8	1.00000	0.82882	0.43925	14.8	0.00000	2.56055	0.37066				
9.9	1.00000	0.82489	0.44073	14.9	0.00000	2.55045	0.37058				
10.0	1.00000	0.82096	0.44221	15.0	0.00000	2.54035	0.37050				
10.1	1.00000	0.81703	0.44369	15.1	0.00000	2.53025	0.37042				
10.2	1.00000	0.81310	0.44517	15.2	0.00000	2.52015	0.37034				
10.3	1.00000	0.80917	0.44665	15.3	0.00000	2.51005	0.37026				
10.4	1.00000	0.80524	0.44813	15.4	0.00000	2.50000	0.37018				
10.5	1.00000	0.80131	0.44961	15.5	0.00000	2.49000	0.37010				
10.6	1.00000	0.79738	0.45109	15.6	0.00000	2.48000	0.37002				
10.7	1.00000	0.79345	0.45257	15.7	0.00000	2.47000	0.36994				
10.8	1.00000	0.78952	0.45405	15.8	0.00000	2.46000	0.36986				
10.9	1.00000	0.78559	0.45553	15.9	0.00000	2.45000	0.36978				
11.0	1.00000	0.78166	0.45701	16.0	0.00000	2.44000	0.36970				
11.1	1.00000	0.77773	0.45849	16.1	0.00000	2.43000	0.36962				
11.2	1.00000	0.77380	0.45997	16.2	0.00000	2.42000	0.36954				
11.3	1.00000	0.76987	0.46145	16.3	0.00000	2.41000	0.36946				
11.4	1.00000	0.76594	0.46293	16.4	0.00000	2.40000	0.36938				
11.5	1.00000	0.76201	0.46441	16.5	0.00000	2.39000	0.36930				
11.6	1.00000	0.75808	0.46589	16.6	0.00000	2.38000	0.36922				
11.7	1.00000	0.75415	0.46737	16.7	0.00000	2.37000	0.36914				
11.8	1.00000	0.75022	0.46885	16.8	0.00000	2.36000	0.36906				
11.9	1.00000	0.74629	0.47033	16.9	0.00000	2.35000	0.36898				
12.0	1.00000	0.74236	0.47181	17.0	0.00000	2.34000	0.36890				
12.1	1.00000	0.73843	0.47329	17.1	0.00000	2.33000	0.36882				
12.2	1.00000	0.73450	0.47477	17.2	0.00000	2.32000	0.36874				
12.3	1.00000	0.73057	0.47625	17.3	0.00000	2.31000	0.36866				
12.4	1.00000	0.72664	0.47773	17.4	0.00000	2.30000	0.36858				
12.5	1.00000	0.72271	0.47921	17.5	0.00000	2.29000	0.36850				
12.6	1.00000	0.71878	0.48069	17.6	0.00000	2.28000	0.36842				
12.7	1.00000	0.71485	0.48217	17.7	0.00000	2.27000	0.36834				
12.8	1.00000	0.71092	0.48365	17.8	0.00000	2.26000	0.36826				
12.9	1.00000	0.70699	0.48513	17.9	0.00000	2.25000	0.36818				
13.0	1.00000	0.70306	0.48661	18.0	0.00000	2.24000	0.36810				
13.1	1.00000	0.69913	0.48809	18.1	0.00000	2.23000	0.36802				
13.2	1.00000	0.69520	0.48957	18.2	0.00000	2.22000	0.36794				
13.3	1.00000	0.69127	0.49105	18.3	0.00000	2.21000	0.36786				
13.4	1.00000	0.68734	0.49253	18.4	0.00000	2.20000	0.36778				
13.5	1.00000	0.68341	0.49401	18.5	0.00000	2.19000	0.36770				
13.6	1.00000	0.67948	0.49549	18.6	0.00000	2.18000	0.36762				
13.7	1.00000	0.67555	0.49697	18.7	0.00000	2.17000	0.36754				
13.8	1.00000	0.67162	0.49845	18.8	0.00000	2.16000					

$\alpha = 1/5$

x	$F_{1/5}(x)$	$H_{4/5}(x)$	$T_{1/5}(x)$	$F_{1/5}(x)$	$H_{4/5}(x)$	$T_{1/5}(x)$	x	$F_{1/5}(x)$	$H_{4/5}(x)$	$T_{1/5}(x)$
1.0000	0.0000	1.00142	0.00000	8.42066	2.07992	0.24688	6.0	700.89071	177.74275	0.25360
1.0005	0.0000	1.07482	0.00000	8.50223	2.35895	0.24688	5.9	77.6624	191.52377	0.25360
1.0010	0.0000	1.14922	0.00000	10.71444	2.63802	0.24688	5.8	86.64406	219.52377	0.25360
1.0015	0.0000	1.22362	0.00000	12.06679	3.01928	0.24688	5.7	106.86704	243.92377	0.25360
1.0020	0.0000	1.29802	0.00000	15.24139	3.40052	0.24688	5.6	131.25832	301.08377	0.25360
1.0025	0.0000	1.37242	0.00000	17.44070	3.81415	0.24688	5.5	148.66678	341.50411	0.25360
1.0030	0.0000	1.44682	0.00000	19.22235	4.26908	0.24688	5.4	162.03473	371.50411	0.25360
1.0035	0.0000	1.52122	0.00000	21.18919	4.76516	0.24688	5.3	172.39770	392.23777	0.25360
1.0040	0.0000	1.59562	0.00000	23.09279	5.30222	0.24688	5.2	180.65101	408.23777	0.25360
1.0045	0.0000	1.67002	0.00000	24.93293	5.88052	0.24688	5.1	200.58906	508.66395	0.25360
1.0050	0.0000	1.74442	0.00000	27.09279	6.51022	0.24688	5.0	227.91207	627.37377	0.25360
1.0055	0.0000	1.81882	0.00000	30.33311	7.19307	0.24688	4.9	274.65101	694.57377	0.25360
1.0060	0.0000	1.89322	0.00000	33.97965	7.92992	0.24688	4.8	304.95213	773.27182	0.25360
1.0065	0.0000	1.96762	0.00000	37.97005	8.72155	0.24688	4.7	338.87755	858.39352	0.25360
1.0070	0.0000	2.04202	0.00000	42.44987	9.56908	0.24688	4.6	375.43888	952.83471	0.25360
1.0075	0.0000	2.11642	0.00000	47.43742	10.47307	0.24688	4.5	415.65986	1057.59471	0.25360
1.0080	0.0000	2.19082	0.00000	52.43005	11.43352	0.24688	4.4	459.54988	1172.79471	0.25360
1.0085	0.0000	2.26522	0.00000	57.42768	12.45047	0.24688	4.3	507.12000	1302.69370	0.25360
1.0090	0.0000	2.33962	0.00000	62.43031	13.52392	0.24688	4.2	558.38000	1445.65107	0.25360
1.0095	0.0000	2.41402	0.00000	67.43794	14.65387	0.24688	4.1	613.33000	1602.21888	0.25360
1.0100	0.0000	2.48842	0.00000	72.44057	15.83932	0.24688	4.0	672.07000	1772.79471	0.25360
1.0105	0.0000	2.56282	0.00000	77.44320	17.08027	0.24688	3.9	734.60000	1957.59471	0.25360
1.0110	0.0000	2.63722	0.00000	82.44583	18.37672	0.24688	3.8	800.93000	2157.07291	0.25360
1.0115	0.0000	2.71162	0.00000	87.44846	19.72867	0.24688	3.7	870.06000	2371.78888	0.25360
1.0120	0.0000	2.78602	0.00000	92.45109	21.13612	0.24688	3.6	942.00000	2601.21888	0.25360
1.0125	0.0000	2.86042	0.00000	97.45372	22.59907	0.24688	3.5	1016.64000	2845.65107	0.25360
1.0130	0.0000	2.93482	0.00000	102.45635	24.11752	0.24688	3.4	1093.98000	3104.65107	0.25360
1.0135	0.0000	3.00922	0.00000	107.45898	25.69147	0.24688	3.3	1174.02000	3378.65107	0.25360
1.0140	0.0000	3.08362	0.00000	112.46161	27.32092	0.24688	3.2	1256.76000	3667.65107	0.25360
1.0145	0.0000	3.15802	0.00000	117.46424	28.99587	0.24688	3.1	1342.30000	3971.65107	0.25360
1.0150	0.0000	3.23242	0.00000	122.46687	30.71532	0.24688	3.0	1430.74000	4291.65107	0.25360
1.0155	0.0000	3.30682	0.00000	127.46950	32.47927	0.24688	2.9	1522.08000	4627.65107	0.25360
1.0160	0.0000	3.38122	0.00000	132.47213	34.28772	0.24688	2.8	1616.32000	4979.65107	0.25360
1.0165	0.0000	3.45562	0.00000	137.47476	36.14067	0.24688	2.7	1713.46000	5347.65107	0.25360
1.0170	0.0000	3.53002	0.00000	142.47739	38.03812	0.24688	2.6	1813.50000	5731.65107	0.25360
1.0175	0.0000	3.60442	0.00000	147.47992	40.00007	0.24688	2.5	1916.54000	6131.65107	0.25360
1.0180	0.0000	3.67882	0.00000	152.48255	42.02752	0.24688	2.4	2022.58000	6547.65107	0.25360
1.0185	0.0000	3.75322	0.00000	157.48518	44.12047	0.24688	2.3	2131.62000	7079.65107	0.25360
1.0190	0.0000	3.82762	0.00000	162.48781	46.27892	0.24688	2.2	2243.66000	7727.65107	0.25360
1.0195	0.0000	3.90202	0.00000	167.49044	48.49287	0.24688	2.1	2358.70000	8391.65107	0.25360
1.0200	0.0000	3.97642	0.00000	172.49307	50.75232	0.24688	2.0	2476.74000	9071.65107	0.25360

TABLE 6B. Lanchester-Clifford-Schlafli Functions $F_{\alpha}(x)$, $H_{1-\alpha}(x)$, and

$T_{\alpha}(x)$ for $\alpha = 1/5$ and x from 1.50 to 10.0.

$\alpha = 2/5$

x	$F_{2/5}(x)$	$H_{3/5}(x)$	$T_{2/5}(x)$	x	$F_{2/5}(x)$	$H_{3/5}(x)$	$T_{2/5}(x)$	x	$F_{2/5}(x)$	$H_{3/5}(x)$	$T_{2/5}(x)$
0.0000	1.00000	0.00000	0.00000	0.5000	1.5977	0.23266	0.23266				
0.0005	1.00025	0.00025	0.00025	0.5010	1.5971	0.23264	0.23264				
0.0010	1.00050	0.00050	0.00050	0.5020	1.5964	0.23263	0.23263				
0.0015	1.00075	0.00075	0.00075	0.5030	1.5957	0.23262	0.23262				
0.0020	1.00100	0.00100	0.00100	0.5040	1.5950	0.23261	0.23261				
0.0025	1.00125	0.00125	0.00125	0.5050	1.5943	0.23260	0.23260				
0.0030	1.00150	0.00150	0.00150	0.5060	1.5936	0.23259	0.23259				
0.0035	1.00175	0.00175	0.00175	0.5070	1.5929	0.23258	0.23258				
0.0040	1.00200	0.00200	0.00200	0.5080	1.5922	0.23257	0.23257				
0.0045	1.00225	0.00225	0.00225	0.5090	1.5915	0.23256	0.23256				
0.0050	1.00250	0.00250	0.00250	0.5100	1.5908	0.23255	0.23255				
0.0055	1.00275	0.00275	0.00275	0.5110	1.5901	0.23254	0.23254				
0.0060	1.00300	0.00300	0.00300	0.5120	1.5894	0.23253	0.23253				
0.0065	1.00325	0.00325	0.00325	0.5130	1.5887	0.23252	0.23252				
0.0070	1.00350	0.00350	0.00350	0.5140	1.5880	0.23251	0.23251				
0.0075	1.00375	0.00375	0.00375	0.5150	1.5873	0.23250	0.23250				
0.0080	1.00400	0.00400	0.00400	0.5160	1.5866	0.23249	0.23249				
0.0085	1.00425	0.00425	0.00425	0.5170	1.5859	0.23248	0.23248				
0.0090	1.00450	0.00450	0.00450	0.5180	1.5852	0.23247	0.23247				
0.0095	1.00475	0.00475	0.00475	0.5190	1.5845	0.23246	0.23246				
0.0100	1.00500	0.00500	0.00500	0.5200	1.5838	0.23245	0.23245				
0.0105	1.00525	0.00525	0.00525	0.5210	1.5831	0.23244	0.23244				
0.0110	1.00550	0.00550	0.00550	0.5220	1.5824	0.23243	0.23243				
0.0115	1.00575	0.00575	0.00575	0.5230	1.5817	0.23242	0.23242				
0.0120	1.00600	0.00600	0.00600	0.5240	1.5810	0.23241	0.23241				
0.0125	1.00625	0.00625	0.00625	0.5250	1.5803	0.23240	0.23240				
0.0130	1.00650	0.00650	0.00650	0.5260	1.5796	0.23239	0.23239				
0.0135	1.00675	0.00675	0.00675	0.5270	1.5789	0.23238	0.23238				
0.0140	1.00700	0.00700	0.00700	0.5280	1.5782	0.23237	0.23237				
0.0145	1.00725	0.00725	0.00725	0.5290	1.5775	0.23236	0.23236				
0.0150	1.00750	0.00750	0.00750	0.5300	1.5768	0.23235	0.23235				
0.0155	1.00775	0.00775	0.00775	0.5310	1.5761	0.23234	0.23234				
0.0160	1.00800	0.00800	0.00800	0.5320	1.5754	0.23233	0.23233				
0.0165	1.00825	0.00825	0.00825	0.5330	1.5747	0.23232	0.23232				
0.0170	1.00850	0.00850	0.00850	0.5340	1.5740	0.23231	0.23231				
0.0175	1.00875	0.00875	0.00875	0.5350	1.5733	0.23230	0.23230				
0.0180	1.00900	0.00900	0.00900	0.5360	1.5726	0.23229	0.23229				
0.0185	1.00925	0.00925	0.00925	0.5370	1.5719	0.23228	0.23228				
0.0190	1.00950	0.00950	0.00950	0.5380	1.5712	0.23227	0.23227				
0.0195	1.00975	0.00975	0.00975	0.5390	1.5705	0.23226	0.23226				
0.0200	1.01000	0.01000	0.01000	0.5400	1.5698	0.23225	0.23225				
0.0205	1.01025	0.01025	0.01025	0.5410	1.5691	0.23224	0.23224				
0.0210	1.01050	0.01050	0.01050	0.5420	1.5684	0.23223	0.23223				
0.0215	1.01075	0.01075	0.01075	0.5430	1.5677	0.23222	0.23222				
0.0220	1.01100	0.01100	0.01100	0.5440	1.5670	0.23221	0.23221				
0.0225	1.01125	0.01125	0.01125	0.5450	1.5663	0.23220	0.23220				
0.0230	1.01150	0.01150	0.01150	0.5460	1.5656	0.23219	0.23219				
0.0235	1.01175	0.01175	0.01175	0.5470	1.5649	0.23218	0.23218				
0.0240	1.01200	0.01200	0.01200	0.5480	1.5642	0.23217	0.23217				
0.0245	1.01225	0.01225	0.01225	0.5490	1.5635	0.23216	0.23216				
0.0250	1.01250	0.01250	0.01250	0.5500	1.5628	0.23215	0.23215				
0.0255	1.01275	0.01275	0.01275	0.5510	1.5621	0.23214	0.23214				
0.0260	1.01300	0.01300	0.01300	0.5520	1.5614	0.23213	0.23213				
0.0265	1.01325	0.01325	0.01325	0.5530	1.5607	0.23212	0.23212				
0.0270	1.01350	0.01350	0.01350	0.5540	1.5600	0.23211	0.23211				
0.0275	1.01375	0.01375	0.01375	0.5550	1.5593	0.23210	0.23210				
0.0280	1.01400	0.01400	0.01400	0.5560	1.5586	0.23209	0.23209				
0.0285	1.01425	0.01425	0.01425	0.5570	1.5579	0.23208	0.23208				
0.0290	1.01450	0.01450	0.01450	0.5580	1.5572	0.23207	0.23207				
0.0295	1.01475	0.01475	0.01475	0.5590	1.5565	0.23206	0.23206				
0.0300	1.01500	0.01500	0.01500	0.5600	1.5558	0.23205	0.23205				
0.0305	1.01525	0.01525	0.01525	0.5610	1.5551	0.23204	0.23204				
0.0310	1.01550	0.01550	0.01550	0.5620	1.5544	0.23203	0.23203				
0.0315	1.01575	0.01575	0.01575	0.5630	1.5537	0.23202	0.23202				
0.0320	1.01600	0.01600	0.01600	0.5640	1.5530	0.23201	0.23201				
0.0325	1.01625	0.01625	0.01625	0.5650	1.5523	0.23200	0.23200				
0.0330	1.01650	0.01650	0.01650	0.5660	1.5516	0.23199	0.23199				
0.0335	1.01675	0.01675	0.01675	0.5670	1.5509	0.23198	0.23198				
0.0340	1.01700	0.01700	0.01700	0.5680	1.5502	0.23197	0.23197				
0.0345	1.01725	0.01725	0.01725	0.5690	1.5495	0.23196	0.23196				
0.0350	1.01750	0.01750	0.01750	0.5700	1.5488	0.23195	0.23195				
0.0355	1.01775	0.01775	0.01775	0.5710	1.5481	0.23194	0.23194				
0.0360	1.01800	0.01800	0.01800	0.5720	1.5474	0.23193	0.23193				
0.0365	1.01825	0.01825	0.01825	0.5730	1.5467	0.23192	0.23192				
0.0370	1.01850	0.01850	0.01850	0.5740	1.5460	0.23191	0.23191				
0.0375	1.01875	0.01875	0.01875	0.5750	1.5453	0.23190	0.23190				
0.0380	1.01900	0.01900	0.01900	0.5760	1.5446	0.23189	0.23189				
0.0385	1.01925	0.01925	0.01925	0.5770	1.5439	0.23188	0.23188				
0.0390	1.01950	0.01950	0.01950	0.5780	1.5432	0.23187	0.23187				
0.0395	1.01975	0.01975	0.01975	0.5790	1.5425	0.23186	0.23186				
0.0400	1.02000	0.02000	0.02000	0.5800	1.5418	0.23185	0.23185				
0.0405	1.02025	0.02025	0.02025	0.5810	1.5411	0.23184	0.23184				
0.0410	1.02050	0.02050	0.02050	0.5820	1.5404	0.23183	0.23183				
0.0415	1.02075	0.02075	0.02075	0.5830	1.5397	0.23182	0.23182				
0.0420	1.02100	0.02100	0.02100	0.5840	1.5390	0.23181	0.23181				
0.0425	1.02125	0.02125	0.02125	0.5850	1.5383	0.23180	0.23180				
0.0430	1.02150	0.02150	0.02150	0.5860	1.5376	0.23179	0.23179				
0.0435	1.02175	0.02175	0.02175	0.5870	1.5369	0.23178	0.23178				
0.0440	1.02200	0.02200	0.02200	0.5880	1.5362	0.23177	0.23177				
0.0445	1.02225	0.02225	0.02225	0.5890	1.5355	0.23176	0.23176				
0.0450	1.02250	0.02250	0.02250	0.5900	1.5348	0.23175	0.23175				
0.0455	1.02275	0.02275	0.02275	0.5910	1.5341	0.23174	0.23174				
0.0460	1.02300	0.02300	0.02300	0.5920	1.5334	0.23173	0.23173				
0.0465	1.02325	0.02325	0.02325	0.5930	1.5327	0.23172	0.23172				
0.0470	1.02350	0.02350	0.02350	0.5940	1.5320	0.23171	0.23171				
0.0475	1.02375	0.02375	0.02375	0.5950	1.5313	0.23170	0.23170				
0.0480	1.02400	0.02400	0.02400	0.5960	1.5306	0.23169	0.23169				
0.0485	1.02425	0.02425	0.02425	0.5970	1.5299	0.23168	0.23168				
0.0490	1.02450	0.02450	0.02450	0.5980	1.5292	0.23167	0.23167				
0.0495	1.02475	0.02475	0.02475	0.5990	1.5285	0.23166	0.23166				
0.0500	1.02500	0.02500	0.02500	0.6000	1.5278	0.23165	0.23165				
0.0505	1.02525	0.02525	0.02525	0.6010	1.5271	0.23164	0.23164				
0.0510	1.02550	0.02550	0.02550	0.6020	1.5264	0.23163	0.23163				
0.0515	1.02575	0.02575	0.02575	0.6030	1.5257	0.23162	0.23162				
0.0520	1.02600	0.02600	0.02600	0.6040	1.5250	0.23161	0.23161				
0.0525	1.02625	0.02625	0.02625	0.6050	1.5243	0.23160	0.23160				
0.0530	1.02650	0.02650	0.02650	0.6060	1.5236	0.23159	0.23159				
0.0535	1.02675	0.02675	0.02675	0.6070	1.5229	0.23158	0.23158				
0.0540	1.02700	0.02700	0.02700	0.6080	1.5222	0.23157	0.23157				
0.0545	1.02725	0.02725	0.02725	0.6090	1.5215	0.23156	0.23156				
0.0550	1.02750	0.02750	0.02750	0.6100	1.5208	0.23155	0.23155				
0.0555	1.02775	0.02775	0.02775	0.6110	1.5201	0.23154	0.23154				
0.0560	1.02800	0.02800	0.02800	0.6120	1.5194	0.23153	0.23153				
0.0565	1.02825	0.02825	0.02825	0.6130	1.5187	0.23152	0.23152				
0.0570	1.02850	0.02850	0.02850	0.6140	1.5180	0.23151	0.23151				
0.0575	1.02875	0.02875	0.02875	0.6150	1.5173	0.23150	0.23150				
0.0580	1.02900	0.02900	0.02900	0.6160	1.5166	0.23149	0.23149				
0.0585	1.02925	0.02925	0.02925	0.6170	1.5159	0.23148	0.23148				
0.0590	1.02950	0.02950	0.02950	0.6180	1.5152	0.23147	0.23147				
0.0595	1.02975	0.02975	0.02975	0.6190	1.5145	0.23146	0.23146				
0.0600	1.03000	0.03000	0.03000	0.6200	1.5138	0.23145	0.23145				
0.0605	1.03025	0.03025	0.03025	0.6210	1.5131	0.23144	0.23144				
0.0610	1.03050	0.03050	0.03050	0.6220	1.5124	0.23143	0.23143				
0.0615	1.03075	0.03075	0.03075	0.62							

$\alpha = 3/5$

x	$F_{3/5}(x)$	$H_{2/5}(x)$	$T_{3/5}(x)$	x	$F_{3/5}(x)$	$H_{2/5}(x)$	$T_{3/5}(x)$	x	$F_{3/5}(x)$	$H_{2/5}(x)$	$T_{3/5}(x)$
1.5000	1.1445	2.8285	1.3627	2.0	3.2512	4.9709	1.4099	6.0	15.1773	29.0522	1.4899
1.5025	1.1471	2.8311	1.3652	2.1	3.2609	5.0000	1.4125	6.1	15.2000	29.1000	1.4900
1.5050	1.1497	2.8337	1.3677	2.2	3.2706	5.0291	1.4150	6.2	15.2227	29.1491	1.4901
1.5075	1.1523	2.8363	1.3702	2.3	3.2803	5.0582	1.4175	6.3	15.2454	29.1982	1.4902
1.5100	1.1549	2.8389	1.3727	2.4	3.2900	5.0873	1.4200	6.4	15.2681	29.2473	1.4903
1.5125	1.1575	2.8415	1.3752	2.5	3.3000	5.1164	1.4225	6.5	15.2908	29.2964	1.4904
1.5150	1.1601	2.8441	1.3777	2.6	3.3100	5.1455	1.4250	6.6	15.3135	29.3455	1.4905
1.5175	1.1627	2.8467	1.3802	2.7	3.3200	5.1746	1.4275	6.7	15.3362	29.3946	1.4906
1.5200	1.1653	2.8493	1.3827	2.8	3.3300	5.2037	1.4300	6.8	15.3589	29.4437	1.4907
1.5225	1.1679	2.8519	1.3852	2.9	3.3400	5.2328	1.4325	6.9	15.3816	29.4928	1.4908
1.5250	1.1705	2.8545	1.3877	3.0	3.3500	5.2619	1.4350	7.0	15.4043	29.5419	1.4909
1.5275	1.1731	2.8571	1.3902	3.1	3.3600	5.2910	1.4375	7.1	15.4270	29.5910	1.4910
1.5300	1.1757	2.8597	1.3927	3.2	3.3700	5.3201	1.4400	7.2	15.4497	29.6401	1.4911
1.5325	1.1783	2.8623	1.3952	3.3	3.3800	5.3492	1.4425	7.3	15.4724	29.6892	1.4912
1.5350	1.1809	2.8649	1.3977	3.4	3.3900	5.3783	1.4450	7.4	15.4951	29.7383	1.4913
1.5375	1.1835	2.8675	1.4002	3.5	3.4000	5.4074	1.4475	7.5	15.5178	29.7874	1.4914
1.5400	1.1861	2.8701	1.4027	3.6	3.4100	5.4365	1.4500	7.6	15.5405	29.8365	1.4915
1.5425	1.1887	2.8727	1.4052	3.7	3.4200	5.4656	1.4525	7.7	15.5632	29.8856	1.4916
1.5450	1.1913	2.8753	1.4077	3.8	3.4300	5.4947	1.4550	7.8	15.5859	29.9347	1.4917
1.5475	1.1939	2.8779	1.4102	3.9	3.4400	5.5238	1.4575	7.9	15.6086	29.9838	1.4918
1.5500	1.1965	2.8805	1.4127	4.0	3.4500	5.5529	1.4600	8.0	15.6313	30.0329	1.4919
1.5525	1.1991	2.8831	1.4152	4.1	3.4600	5.5820	1.4625	8.1	15.6540	30.0820	1.4920
1.5550	1.2017	2.8857	1.4177	4.2	3.4700	5.6111	1.4650	8.2	15.6767	30.1311	1.4921
1.5575	1.2043	2.8883	1.4202	4.3	3.4800	5.6402	1.4675	8.3	15.6994	30.1802	1.4922
1.5600	1.2069	2.8909	1.4227	4.4	3.4900	5.6693	1.4700	8.4	15.7221	30.2293	1.4923
1.5625	1.2095	2.8935	1.4252	4.5	3.5000	5.6984	1.4725	8.5	15.7448	30.2784	1.4924
1.5650	1.2121	2.8961	1.4277	4.6	3.5100	5.7275	1.4750	8.6	15.7675	30.3275	1.4925
1.5675	1.2147	2.8987	1.4302	4.7	3.5200	5.7566	1.4775	8.7	15.7902	30.3766	1.4926
1.5700	1.2173	2.9013	1.4327	4.8	3.5300	5.7857	1.4800	8.8	15.8129	30.4257	1.4927
1.5725	1.2199	2.9039	1.4352	4.9	3.5400	5.8148	1.4825	8.9	15.8356	30.4748	1.4928
1.5750	1.2225	2.9065	1.4377	5.0	3.5500	5.8439	1.4850	9.0	15.8583	30.5239	1.4929
1.5775	1.2251	2.9091	1.4402	5.1	3.5600	5.8730	1.4875	9.1	15.8810	30.5730	1.4930
1.5800	1.2277	2.9117	1.4427	5.2	3.5700	5.9021	1.4900	9.2	15.9037	30.6221	1.4931
1.5825	1.2303	2.9143	1.4452	5.3	3.5800	5.9312	1.4925	9.3	15.9264	30.6712	1.4932
1.5850	1.2329	2.9169	1.4477	5.4	3.5900	5.9603	1.4950	9.4	15.9491	30.7203	1.4933
1.5875	1.2355	2.9195	1.4502	5.5	3.6000	5.9894	1.4975	9.5	15.9718	30.7694	1.4934
1.5900	1.2381	2.9221	1.4527	5.6	3.6100	6.0185	1.5000	9.6	15.9945	30.8185	1.4935
1.5925	1.2407	2.9247	1.4552	5.7	3.6200	6.0476	1.5025	9.7	16.0172	30.8676	1.4936
1.5950	1.2433	2.9273	1.4577	5.8	3.6300	6.0767	1.5050	9.8	16.0399	30.9167	1.4937
1.5975	1.2459	2.9299	1.4602	5.9	3.6400	6.1058	1.5075	9.9	16.0626	30.9658	1.4938
1.6000	1.2485	2.9325	1.4627	6.0	3.6500	6.1349	1.5100	10.0	16.0853	31.0149	1.4939

TABLE 8B. Lanchester-Clifford-Schläfli Functions $F_{\alpha}(x)$, $H_{1-\alpha}(x)$, and

$T_{\alpha}(x)$ for $\alpha = 3/5$ and x from 1.50 to 10.0.

$\alpha = 2/7$

x	$F_{2/7}(x)$	$H_{5/7}(x)$	$T_{2/7}(x)$	x	$F_{2/7}(x)$	$H_{5/7}(x)$	$T_{2/7}(x)$	x	$F_{2/7}(x)$	$H_{5/7}(x)$	$T_{2/7}(x)$
0.0000	1.0000	0.0000	0.0000	0.0000	1.2312	0.2033	0.1433	1.0000	1.9323	0.5992	0.3078
0.0005	1.0005	0.0005	0.0005	0.0005	1.2349	0.2037	0.1437	1.0005	1.9379	0.6009	0.3094
0.0010	1.0010	0.0010	0.0010	0.0010	1.2386	0.2041	0.1441	1.0010	1.9435	0.6026	0.3110
0.0015	1.0015	0.0015	0.0015	0.0015	1.2423	0.2045	0.1445	1.0015	1.9491	0.6043	0.3126
0.0020	1.0020	0.0020	0.0020	0.0020	1.2460	0.2049	0.1449	1.0020	1.9547	0.6060	0.3142
0.0025	1.0025	0.0025	0.0025	0.0025	1.2497	0.2053	0.1453	1.0025	1.9603	0.6077	0.3158
0.0030	1.0030	0.0030	0.0030	0.0030	1.2534	0.2057	0.1457	1.0030	1.9659	0.6094	0.3174
0.0035	1.0035	0.0035	0.0035	0.0035	1.2571	0.2061	0.1461	1.0035	1.9715	0.6111	0.3190
0.0040	1.0040	0.0040	0.0040	0.0040	1.2608	0.2065	0.1465	1.0040	1.9771	0.6128	0.3206
0.0045	1.0045	0.0045	0.0045	0.0045	1.2645	0.2069	0.1469	1.0045	1.9827	0.6145	0.3222
0.0050	1.0050	0.0050	0.0050	0.0050	1.2682	0.2073	0.1473	1.0050	1.9883	0.6162	0.3238
0.0055	1.0055	0.0055	0.0055	0.0055	1.2719	0.2077	0.1477	1.0055	1.9939	0.6179	0.3254
0.0060	1.0060	0.0060	0.0060	0.0060	1.2756	0.2081	0.1481	1.0060	1.9995	0.6196	0.3270
0.0065	1.0065	0.0065	0.0065	0.0065	1.2793	0.2085	0.1485	1.0065	2.0051	0.6213	0.3286
0.0070	1.0070	0.0070	0.0070	0.0070	1.2830	0.2089	0.1489	1.0070	2.0107	0.6230	0.3302
0.0075	1.0075	0.0075	0.0075	0.0075	1.2867	0.2093	0.1493	1.0075	2.0163	0.6247	0.3318
0.0080	1.0080	0.0080	0.0080	0.0080	1.2904	0.2097	0.1497	1.0080	2.0219	0.6264	0.3334
0.0085	1.0085	0.0085	0.0085	0.0085	1.2941	0.2101	0.1501	1.0085	2.0275	0.6281	0.3350
0.0090	1.0090	0.0090	0.0090	0.0090	1.2978	0.2105	0.1505	1.0090	2.0331	0.6298	0.3366
0.0095	1.0095	0.0095	0.0095	0.0095	1.3015	0.2109	0.1509	1.0095	2.0387	0.6315	0.3382
0.0100	1.0100	0.0100	0.0100	0.0100	1.3052	0.2113	0.1513	1.0100	2.0443	0.6332	0.3398
0.0105	1.0105	0.0105	0.0105	0.0105	1.3089	0.2117	0.1517	1.0105	2.0499	0.6349	0.3414
0.0110	1.0110	0.0110	0.0110	0.0110	1.3126	0.2121	0.1521	1.0110	2.0555	0.6366	0.3430
0.0115	1.0115	0.0115	0.0115	0.0115	1.3163	0.2125	0.1525	1.0115	2.0611	0.6383	0.3446
0.0120	1.0120	0.0120	0.0120	0.0120	1.3200	0.2129	0.1529	1.0120	2.0667	0.6400	0.3462
0.0125	1.0125	0.0125	0.0125	0.0125	1.3237	0.2133	0.1533	1.0125	2.0723	0.6417	0.3478
0.0130	1.0130	0.0130	0.0130	0.0130	1.3274	0.2137	0.1537	1.0130	2.0779	0.6434	0.3494
0.0135	1.0135	0.0135	0.0135	0.0135	1.3311	0.2141	0.1541	1.0135	2.0835	0.6451	0.3510
0.0140	1.0140	0.0140	0.0140	0.0140	1.3348	0.2145	0.1545	1.0140	2.0891	0.6468	0.3526
0.0145	1.0145	0.0145	0.0145	0.0145	1.3385	0.2149	0.1549	1.0145	2.0947	0.6485	0.3542
0.0150	1.0150	0.0150	0.0150	0.0150	1.3422	0.2153	0.1553	1.0150	2.1003	0.6502	0.3558
0.0155	1.0155	0.0155	0.0155	0.0155	1.3459	0.2157	0.1557	1.0155	2.1059	0.6519	0.3574
0.0160	1.0160	0.0160	0.0160	0.0160	1.3496	0.2161	0.1561	1.0160	2.1115	0.6536	0.3590
0.0165	1.0165	0.0165	0.0165	0.0165	1.3533	0.2165	0.1565	1.0165	2.1171	0.6553	0.3606
0.0170	1.0170	0.0170	0.0170	0.0170	1.3570	0.2169	0.1569	1.0170	2.1227	0.6570	0.3622
0.0175	1.0175	0.0175	0.0175	0.0175	1.3607	0.2173	0.1573	1.0175	2.1283	0.6587	0.3638
0.0180	1.0180	0.0180	0.0180	0.0180	1.3644	0.2177	0.1577	1.0180	2.1339	0.6604	0.3654
0.0185	1.0185	0.0185	0.0185	0.0185	1.3681	0.2181	0.1581	1.0185	2.1395	0.6621	0.3670
0.0190	1.0190	0.0190	0.0190	0.0190	1.3718	0.2185	0.1585	1.0190	2.1451	0.6638	0.3686
0.0195	1.0195	0.0195	0.0195	0.0195	1.3755	0.2189	0.1589	1.0195	2.1507	0.6655	0.3702
0.0200	1.0200	0.0200	0.0200	0.0200	1.3792	0.2193	0.1593	1.0200	2.1563	0.6672	0.3718
0.0205	1.0205	0.0205	0.0205	0.0205	1.3829	0.2197	0.1597	1.0205	2.1619	0.6689	0.3734
0.0210	1.0210	0.0210	0.0210	0.0210	1.3866	0.2201	0.1601	1.0210	2.1675	0.6706	0.3750
0.0215	1.0215	0.0215	0.0215	0.0215	1.3903	0.2205	0.1605	1.0215	2.1731	0.6723	0.3766
0.0220	1.0220	0.0220	0.0220	0.0220	1.3940	0.2209	0.1609	1.0220	2.1787	0.6740	0.3782
0.0225	1.0225	0.0225	0.0225	0.0225	1.3977	0.2213	0.1613	1.0225	2.1843	0.6757	0.3798
0.0230	1.0230	0.0230	0.0230	0.0230	1.4014	0.2217	0.1617	1.0230	2.1899	0.6774	0.3814
0.0235	1.0235	0.0235	0.0235	0.0235	1.4051	0.2221	0.1621	1.0235	2.1955	0.6791	0.3830
0.0240	1.0240	0.0240	0.0240	0.0240	1.4088	0.2225	0.1625	1.0240	2.2011	0.6808	0.3846
0.0245	1.0245	0.0245	0.0245	0.0245	1.4125	0.2229	0.1629	1.0245	2.2067	0.6825	0.3862
0.0250	1.0250	0.0250	0.0250	0.0250	1.4162	0.2233	0.1633	1.0250	2.2123	0.6842	0.3878
0.0255	1.0255	0.0255	0.0255	0.0255	1.4199	0.2237	0.1637	1.0255	2.2179	0.6859	0.3894
0.0260	1.0260	0.0260	0.0260	0.0260	1.4236	0.2241	0.1641	1.0260	2.2235	0.6876	0.3910
0.0265	1.0265	0.0265	0.0265	0.0265	1.4273	0.2245	0.1645	1.0265	2.2291	0.6893	0.3926
0.0270	1.0270	0.0270	0.0270	0.0270	1.4310	0.2249	0.1649	1.0270	2.2347	0.6910	0.3942
0.0275	1.0275	0.0275	0.0275	0.0275	1.4347	0.2253	0.1653	1.0275	2.2403	0.6927	0.3958
0.0280	1.0280	0.0280	0.0280	0.0280	1.4384	0.2257	0.1657	1.0280	2.2459	0.6944	0.3974
0.0285	1.0285	0.0285	0.0285	0.0285	1.4421	0.2261	0.1661	1.0285	2.2515	0.6961	0.3990
0.0290	1.0290	0.0290	0.0290	0.0290	1.4458	0.2265	0.1665	1.0290	2.2571	0.6978	0.4006
0.0295	1.0295	0.0295	0.0295	0.0295	1.4495	0.2269	0.1669	1.0295	2.2627	0.6995	0.4022
0.0300	1.0300	0.0300	0.0300	0.0300	1.4532	0.2273	0.1673	1.0300	2.2683	0.7012	0.4038
0.0305	1.0305	0.0305	0.0305	0.0305	1.4569	0.2277	0.1677	1.0305	2.2739	0.7029	0.4054
0.0310	1.0310	0.0310	0.0310	0.0310	1.4606	0.2281	0.1681	1.0310	2.2795	0.7046	0.4070
0.0315	1.0315	0.0315	0.0315	0.0315	1.4643	0.2285	0.1685	1.0315	2.2851	0.7063	0.4086
0.0320	1.0320	0.0320	0.0320	0.0320	1.4680	0.2289	0.1689	1.0320	2.2907	0.7080	0.4102
0.0325	1.0325	0.0325	0.0325	0.0325	1.4717	0.2293	0.1693	1.0325	2.2963	0.7097	0.4118
0.0330	1.0330	0.0330	0.0330	0.0330	1.4754	0.2297	0.1697	1.0330	2.3019	0.7114	0.4134
0.0335	1.0335	0.0335	0.0335	0.0335	1.4791	0.2301	0.1701	1.0335	2.3075	0.7131	0.4150
0.0340	1.0340	0.0340	0.0340	0.0340	1.4828	0.2305	0.1705	1.0340	2.3131	0.7148	0.4166
0.0345	1.0345	0.0345	0.0345	0.0345	1.4865	0.2309	0.1709	1.0345	2.3187	0.7165	0.4182
0.0350	1.0350	0.0350	0.0350	0.0350	1.4902	0.2313	0.1713	1.0350	2.3243	0.7182	0.4198
0.0355	1.0355	0.0355	0.0355	0.0355	1.4939	0.2317	0.1717	1.0355	2.3299	0.7199	0.4214
0.0360	1.0360	0.0360	0.0360	0.0360	1.4976	0.2321	0.1721	1.0360	2.3355	0.7216	0.4230
0.0365	1.0365	0.0365	0.0365	0.0365	1.5013	0.2325	0.1725	1.0365	2.3411	0.7233	0.4246
0.0370	1.0370	0.0370	0.0370	0.0370	1.5050	0.2329	0.1729	1.0370	2.3467	0.7250	0.4262
0.0375	1.0375	0.0375	0.0375	0.0375	1.5087	0.2333	0.1733	1.0375	2.3523	0.7267	0.4278
0.0380	1.0380	0.0380	0.0380	0.0380	1.5124	0.2337	0.1737	1.0380	2.3579	0.7284	0.4294
0.0385	1.0385	0.0385	0.0385	0.0385	1.5161	0.2341	0.1741	1.0385	2.3635	0.7301	0.4310
0.0390	1.0390	0.0390	0.0390	0.0390	1.5198	0.2345	0.1745	1.0390	2.3691	0.7318	0.4326
0.0395	1.0395	0.0395	0.0395	0.0395	1.5235	0.2349	0.1749	1.0395	2.3747	0.7335	0.4342
0.0400	1.0400	0.0400	0.0400	0.0400	1.5272	0.2353	0.1753	1.0400	2.3803	0.7352	0.4358
0.0405	1.0405	0.0405	0.0405	0.0405	1.5309	0.2357	0.1757	1.0405	2.3859	0.7369	0.4374
0.0410	1.0410	0.0410	0.0410	0.0410	1.5346	0.2361	0.1761	1.0410	2.3915	0.7386	0.4390
0.0415	1.0415	0.0415	0.0415	0.0415	1.5383	0.2365	0.1765	1.0415	2.3971	0.7403	0.4406
0.0420	1.0420	0.0420	0.0420	0.0420	1.5420	0.2369	0.1769	1.0420	2.4027	0.7420	0.4422
0.0425	1.0425	0.0425	0.0425	0.0425	1.5457	0.2373	0.1773	1.0425	2.4083	0.7437	0.4438
0.0430	1.0430	0.0430	0.0430	0.0430	1.5494	0.2377	0.1777	1.0430	2.4139	0.7454	0.4454
0.0435	1.0435	0.0435	0.0435	0.0435	1.5531	0.2381	0.1781	1.0435	2.4195	0.7471	0.4470
0.0440	1.0440	0.0440	0.0440	0.044							

$\alpha = 4/7$

x	$F_{4/7}(x)$	$H_{3/7}(x)$	$T_{4/7}(x)$	x	$F_{4/7}(x)$	$H_{3/7}(x)$	$T_{4/7}(x)$	x	$F_{4/7}(x)$	$H_{3/7}(x)$	$T_{4/7}(x)$
0.0000	2.2999	2.2999	1.2099	0.0000	3.3028	4.3155	1.2099	0.0000	1.9177	2.8947	1.3053
0.0005	2.2998	2.2998	1.2098	0.0005	3.2999	4.3148	1.2098	0.0005	1.9176	2.8946	1.3053
0.0010	2.2997	2.2997	1.2097	0.0010	3.2970	4.3141	1.2097	0.0010	1.9175	2.8945	1.3053
0.0015	2.2996	2.2996	1.2096	0.0015	3.2941	4.3134	1.2096	0.0015	1.9174	2.8944	1.3053
0.0020	2.2995	2.2995	1.2095	0.0020	3.2912	4.3127	1.2095	0.0020	1.9173	2.8943	1.3053
0.0025	2.2994	2.2994	1.2094	0.0025	3.2883	4.3120	1.2094	0.0025	1.9172	2.8942	1.3053
0.0030	2.2993	2.2993	1.2093	0.0030	3.2854	4.3113	1.2093	0.0030	1.9171	2.8941	1.3053
0.0035	2.2992	2.2992	1.2092	0.0035	3.2825	4.3106	1.2092	0.0035	1.9170	2.8940	1.3053
0.0040	2.2991	2.2991	1.2091	0.0040	3.2796	4.3099	1.2091	0.0040	1.9169	2.8939	1.3053
0.0045	2.2990	2.2990	1.2090	0.0045	3.2767	4.3092	1.2090	0.0045	1.9168	2.8938	1.3053
0.0050	2.2989	2.2989	1.2089	0.0050	3.2738	4.3085	1.2089	0.0050	1.9167	2.8937	1.3053
0.0055	2.2988	2.2988	1.2088	0.0055	3.2709	4.3078	1.2088	0.0055	1.9166	2.8936	1.3053
0.0060	2.2987	2.2987	1.2087	0.0060	3.2680	4.3071	1.2087	0.0060	1.9165	2.8935	1.3053
0.0065	2.2986	2.2986	1.2086	0.0065	3.2651	4.3064	1.2086	0.0065	1.9164	2.8934	1.3053
0.0070	2.2985	2.2985	1.2085	0.0070	3.2622	4.3057	1.2085	0.0070	1.9163	2.8933	1.3053
0.0075	2.2984	2.2984	1.2084	0.0075	3.2593	4.3050	1.2084	0.0075	1.9162	2.8932	1.3053
0.0080	2.2983	2.2983	1.2083	0.0080	3.2564	4.3043	1.2083	0.0080	1.9161	2.8931	1.3053
0.0085	2.2982	2.2982	1.2082	0.0085	3.2535	4.3036	1.2082	0.0085	1.9160	2.8930	1.3053
0.0090	2.2981	2.2981	1.2081	0.0090	3.2506	4.3029	1.2081	0.0090	1.9159	2.8929	1.3053
0.0095	2.2980	2.2980	1.2080	0.0095	3.2477	4.3022	1.2080	0.0095	1.9158	2.8928	1.3053
0.0100	2.2979	2.2979	1.2079	0.0100	3.2448	4.3015	1.2079	0.0100	1.9157	2.8927	1.3053
0.0105	2.2978	2.2978	1.2078	0.0105	3.2419	4.3008	1.2078	0.0105	1.9156	2.8926	1.3053
0.0110	2.2977	2.2977	1.2077	0.0110	3.2390	4.3001	1.2077	0.0110	1.9155	2.8925	1.3053
0.0115	2.2976	2.2976	1.2076	0.0115	3.2361	4.2994	1.2076	0.0115	1.9154	2.8924	1.3053
0.0120	2.2975	2.2975	1.2075	0.0120	3.2332	4.2987	1.2075	0.0120	1.9153	2.8923	1.3053
0.0125	2.2974	2.2974	1.2074	0.0125	3.2303	4.2980	1.2074	0.0125	1.9152	2.8922	1.3053
0.0130	2.2973	2.2973	1.2073	0.0130	3.2274	4.2973	1.2073	0.0130	1.9151	2.8921	1.3053
0.0135	2.2972	2.2972	1.2072	0.0135	3.2245	4.2966	1.2072	0.0135	1.9150	2.8920	1.3053
0.0140	2.2971	2.2971	1.2071	0.0140	3.2216	4.2959	1.2071	0.0140	1.9149	2.8919	1.3053
0.0145	2.2970	2.2970	1.2070	0.0145	3.2187	4.2952	1.2070	0.0145	1.9148	2.8918	1.3053
0.0150	2.2969	2.2969	1.2069	0.0150	3.2158	4.2945	1.2069	0.0150	1.9147	2.8917	1.3053
0.0155	2.2968	2.2968	1.2068	0.0155	3.2129	4.2938	1.2068	0.0155	1.9146	2.8916	1.3053
0.0160	2.2967	2.2967	1.2067	0.0160	3.2100	4.2931	1.2067	0.0160	1.9145	2.8915	1.3053
0.0165	2.2966	2.2966	1.2066	0.0165	3.2071	4.2924	1.2066	0.0165	1.9144	2.8914	1.3053
0.0170	2.2965	2.2965	1.2065	0.0170	3.2042	4.2917	1.2065	0.0170	1.9143	2.8913	1.3053
0.0175	2.2964	2.2964	1.2064	0.0175	3.2013	4.2910	1.2064	0.0175	1.9142	2.8912	1.3053
0.0180	2.2963	2.2963	1.2063	0.0180	3.1984	4.2903	1.2063	0.0180	1.9141	2.8911	1.3053
0.0185	2.2962	2.2962	1.2062	0.0185	3.1955	4.2896	1.2062	0.0185	1.9140	2.8910	1.3053
0.0190	2.2961	2.2961	1.2061	0.0190	3.1926	4.2889	1.2061	0.0190	1.9139	2.8909	1.3053
0.0195	2.2960	2.2960	1.2060	0.0195	3.1897	4.2882	1.2060	0.0195	1.9138	2.8908	1.3053
0.0200	2.2959	2.2959	1.2059	0.0200	3.1868	4.2875	1.2059	0.0200	1.9137	2.8907	1.3053
0.0205	2.2958	2.2958	1.2058	0.0205	3.1839	4.2868	1.2058	0.0205	1.9136	2.8906	1.3053
0.0210	2.2957	2.2957	1.2057	0.0210	3.1810	4.2861	1.2057	0.0210	1.9135	2.8905	1.3053
0.0215	2.2956	2.2956	1.2056	0.0215	3.1781	4.2854	1.2056	0.0215	1.9134	2.8904	1.3053
0.0220	2.2955	2.2955	1.2055	0.0220	3.1752	4.2847	1.2055	0.0220	1.9133	2.8903	1.3053
0.0225	2.2954	2.2954	1.2054	0.0225	3.1723	4.2840	1.2054	0.0225	1.9132	2.8902	1.3053
0.0230	2.2953	2.2953	1.2053	0.0230	3.1694	4.2833	1.2053	0.0230	1.9131	2.8901	1.3053
0.0235	2.2952	2.2952	1.2052	0.0235	3.1665	4.2826	1.2052	0.0235	1.9130	2.8900	1.3053
0.0240	2.2951	2.2951	1.2051	0.0240	3.1636	4.2819	1.2051	0.0240	1.9129	2.8899	1.3053
0.0245	2.2950	2.2950	1.2050	0.0245	3.1607	4.2812	1.2050	0.0245	1.9128	2.8898	1.3053
0.0250	2.2949	2.2949	1.2049	0.0250	3.1578	4.2805	1.2049	0.0250	1.9127	2.8897	1.3053
0.0255	2.2948	2.2948	1.2048	0.0255	3.1549	4.2798	1.2048	0.0255	1.9126	2.8896	1.3053
0.0260	2.2947	2.2947	1.2047	0.0260	3.1520	4.2791	1.2047	0.0260	1.9125	2.8895	1.3053
0.0265	2.2946	2.2946	1.2046	0.0265	3.1491	4.2784	1.2046	0.0265	1.9124	2.8894	1.3053
0.0270	2.2945	2.2945	1.2045	0.0270	3.1462	4.2777	1.2045	0.0270	1.9123	2.8893	1.3053
0.0275	2.2944	2.2944	1.2044	0.0275	3.1433	4.2770	1.2044	0.0275	1.9122	2.8892	1.3053
0.0280	2.2943	2.2943	1.2043	0.0280	3.1404	4.2763	1.2043	0.0280	1.9121	2.8891	1.3053
0.0285	2.2942	2.2942	1.2042	0.0285	3.1375	4.2756	1.2042	0.0285	1.9120	2.8890	1.3053
0.0290	2.2941	2.2941	1.2041	0.0290	3.1346	4.2749	1.2041	0.0290	1.9119	2.8889	1.3053
0.0295	2.2940	2.2940	1.2040	0.0295	3.1317	4.2742	1.2040	0.0295	1.9118	2.8888	1.3053
0.0300	2.2939	2.2939	1.2039	0.0300	3.1288	4.2735	1.2039	0.0300	1.9117	2.8887	1.3053
0.0305	2.2938	2.2938	1.2038	0.0305	3.1259	4.2728	1.2038	0.0305	1.9116	2.8886	1.3053
0.0310	2.2937	2.2937	1.2037	0.0310	3.1230	4.2721	1.2037	0.0310	1.9115	2.8885	1.3053
0.0315	2.2936	2.2936	1.2036	0.0315	3.1201	4.2714	1.2036	0.0315	1.9114	2.8884	1.3053
0.0320	2.2935	2.2935	1.2035	0.0320	3.1172	4.2707	1.2035	0.0320	1.9113	2.8883	1.3053
0.0325	2.2934	2.2934	1.2034	0.0325	3.1143	4.2700	1.2034	0.0325	1.9112	2.8882	1.3053
0.0330	2.2933	2.2933	1.2033	0.0330	3.1114	4.2693	1.2033	0.0330	1.9111	2.8881	1.3053
0.0335	2.2932	2.2932	1.2032	0.0335	3.1085	4.2686	1.2032	0.0335	1.9110	2.8880	1.3053
0.0340	2.2931	2.2931	1.2031	0.0340	3.1056	4.2679	1.2031	0.0340	1.9109	2.8879	1.3053
0.0345	2.2930	2.2930	1.2030	0.0345	3.1027	4.2672	1.2030	0.0345	1.9108	2.8878	1.3053
0.0350	2.2929	2.2929	1.2029	0.0350	3.0998	4.2665	1.2029	0.0350	1.9107	2.8877	1.3053
0.0355	2.2928	2.2928	1.2028	0.0355	3.0969	4.2658	1.2028	0.0355	1.9106	2.8876	1.3053
0.0360	2.2927	2.2927	1.2027	0.0360	3.0940	4.2651	1.2027	0.0360	1.9105	2.8875	1.3053
0.0365	2.2926	2.2926	1.2026	0.0365	3.0911	4.2644	1.2026	0.0365	1.9104	2.8874	1.3053
0.0370	2.2925	2.2925	1.2025	0.0370	3.0882	4.2637	1.2025	0.0370	1.9103	2.8873	1.3053
0.0375	2.2924	2.2924	1.2024	0.0375	3.0853	4.2630	1.2024	0.0375	1.9102	2.8872	1.3053
0.0380	2.2923	2.2923	1.2023	0.0380	3.0824	4.2623	1.2023	0.0380	1.9101	2.8871	1.3053
0.0385	2.2922	2.2922	1.2022	0.0385	3.0795	4.2616	1.2022	0.0385	1.9100	2.8870	1.3053
0.0390	2.2921	2.2921	1.2021	0.0390	3.0766	4.2609	1.2021	0.0390	1.9099	2.8869	1.3053
0.0395	2.2920	2.2920	1.2020	0.0395	3.0737	4.2602	1.2020	0.0395	1.9098	2.8868	1.3053
0.0400	2.2919	2.2919	1.2019	0.0400	3.0708	4.2595	1.2019	0.0400	1.9097	2.8867	1.3053
0.0405	2.2918	2.2918	1.2018	0.0405	3.0679	4.2588	1.2018	0.0405	1.9096	2.8866	1.3053
0.0410	2.2917	2.2917	1.2017	0.0410	3.0650	4.2581	1.2017	0.0410	1.9095	2.8865	1.3053
0.0415	2.2916	2.2916	1.2016	0.0415	3.0621	4.2574	1.2016	0.0415	1.9094	2.8864	1.3053
0.0420	2.2915	2.2915	1.2015	0.0420	3.0592	4.2567	1.2015	0.0420	1.9093	2.8863	1.3053
0.0425	2.2914	2.2914	1.2014	0.0425	3.0563	4.2560	1.2014	0.0425	1.9092	2.8862	1.3053
0.0430	2.2913	2.2913	1.2013	0.0430	3.0534	4.2553	1.2013	0.0430	1.9091	2.8861	1.3053
0.0435	2.2912	2.2912	1.2012	0.0435	3.0505	4.2546	1.2012	0.0435	1.9090	2.8860	1.3053
0.0440	2.2911	2.2911	1.2011	0.0440</							

$\alpha = 5/7$

x	$F_{5/7}(x)$	$H_{2/7}(x)$	$T_{5/7}(x)$	x	$F_{5/7}(x)$	$H_{2/7}(x)$	$T_{5/7}(x)$	x	$F_{5/7}(x)$	$H_{2/7}(x)$	$T_{5/7}(x)$
0.0000	0.0000	0.0000	0.0000	0.5000	1.08918	1.69245	1.2715	0.5000	1.3782	2.8900	2.0275
0.0004	0.0004	0.0004	0.0004	0.5004	1.09225	1.69245	1.2715	0.5004	1.3782	2.8900	2.0275
0.0008	0.0008	0.0008	0.0008	0.5008	1.09542	1.69245	1.2715	0.5008	1.3782	2.8900	2.0275
0.0012	0.0012	0.0012	0.0012	0.5012	1.09859	1.69245	1.2715	0.5012	1.3782	2.8900	2.0275
0.0016	0.0016	0.0016	0.0016	0.5016	1.10176	1.69245	1.2715	0.5016	1.3782	2.8900	2.0275
0.0020	0.0020	0.0020	0.0020	0.5020	1.10493	1.69245	1.2715	0.5020	1.3782	2.8900	2.0275
0.0024	0.0024	0.0024	0.0024	0.5024	1.10810	1.69245	1.2715	0.5024	1.3782	2.8900	2.0275
0.0028	0.0028	0.0028	0.0028	0.5028	1.11127	1.69245	1.2715	0.5028	1.3782	2.8900	2.0275
0.0032	0.0032	0.0032	0.0032	0.5032	1.11444	1.69245	1.2715	0.5032	1.3782	2.8900	2.0275
0.0036	0.0036	0.0036	0.0036	0.5036	1.11761	1.69245	1.2715	0.5036	1.3782	2.8900	2.0275
0.0040	0.0040	0.0040	0.0040	0.5040	1.12078	1.69245	1.2715	0.5040	1.3782	2.8900	2.0275
0.0044	0.0044	0.0044	0.0044	0.5044	1.12395	1.69245	1.2715	0.5044	1.3782	2.8900	2.0275
0.0048	0.0048	0.0048	0.0048	0.5048	1.12712	1.69245	1.2715	0.5048	1.3782	2.8900	2.0275
0.0052	0.0052	0.0052	0.0052	0.5052	1.13029	1.69245	1.2715	0.5052	1.3782	2.8900	2.0275
0.0056	0.0056	0.0056	0.0056	0.5056	1.13346	1.69245	1.2715	0.5056	1.3782	2.8900	2.0275
0.0060	0.0060	0.0060	0.0060	0.5060	1.13663	1.69245	1.2715	0.5060	1.3782	2.8900	2.0275
0.0064	0.0064	0.0064	0.0064	0.5064	1.13980	1.69245	1.2715	0.5064	1.3782	2.8900	2.0275
0.0068	0.0068	0.0068	0.0068	0.5068	1.14297	1.69245	1.2715	0.5068	1.3782	2.8900	2.0275
0.0072	0.0072	0.0072	0.0072	0.5072	1.14614	1.69245	1.2715	0.5072	1.3782	2.8900	2.0275
0.0076	0.0076	0.0076	0.0076	0.5076	1.14931	1.69245	1.2715	0.5076	1.3782	2.8900	2.0275
0.0080	0.0080	0.0080	0.0080	0.5080	1.15248	1.69245	1.2715	0.5080	1.3782	2.8900	2.0275
0.0084	0.0084	0.0084	0.0084	0.5084	1.15565	1.69245	1.2715	0.5084	1.3782	2.8900	2.0275
0.0088	0.0088	0.0088	0.0088	0.5088	1.15882	1.69245	1.2715	0.5088	1.3782	2.8900	2.0275
0.0092	0.0092	0.0092	0.0092	0.5092	1.16199	1.69245	1.2715	0.5092	1.3782	2.8900	2.0275
0.0096	0.0096	0.0096	0.0096	0.5096	1.16516	1.69245	1.2715	0.5096	1.3782	2.8900	2.0275
0.0100	0.0100	0.0100	0.0100	0.5100	1.16833	1.69245	1.2715	0.5100	1.3782	2.8900	2.0275
0.0104	0.0104	0.0104	0.0104	0.5104	1.17150	1.69245	1.2715	0.5104	1.3782	2.8900	2.0275
0.0108	0.0108	0.0108	0.0108	0.5108	1.17467	1.69245	1.2715	0.5108	1.3782	2.8900	2.0275
0.0112	0.0112	0.0112	0.0112	0.5112	1.17784	1.69245	1.2715	0.5112	1.3782	2.8900	2.0275
0.0116	0.0116	0.0116	0.0116	0.5116	1.18101	1.69245	1.2715	0.5116	1.3782	2.8900	2.0275
0.0120	0.0120	0.0120	0.0120	0.5120	1.18418	1.69245	1.2715	0.5120	1.3782	2.8900	2.0275
0.0124	0.0124	0.0124	0.0124	0.5124	1.18735	1.69245	1.2715	0.5124	1.3782	2.8900	2.0275
0.0128	0.0128	0.0128	0.0128	0.5128	1.19052	1.69245	1.2715	0.5128	1.3782	2.8900	2.0275
0.0132	0.0132	0.0132	0.0132	0.5132	1.19369	1.69245	1.2715	0.5132	1.3782	2.8900	2.0275
0.0136	0.0136	0.0136	0.0136	0.5136	1.19686	1.69245	1.2715	0.5136	1.3782	2.8900	2.0275
0.0140	0.0140	0.0140	0.0140	0.5140	1.19999	1.69245	1.2715	0.5140	1.3782	2.8900	2.0275
0.0144	0.0144	0.0144	0.0144	0.5144	1.20312	1.69245	1.2715	0.5144	1.3782	2.8900	2.0275
0.0148	0.0148	0.0148	0.0148	0.5148	1.20625	1.69245	1.2715	0.5148	1.3782	2.8900	2.0275
0.0152	0.0152	0.0152	0.0152	0.5152	1.20938	1.69245	1.2715	0.5152	1.3782	2.8900	2.0275
0.0156	0.0156	0.0156	0.0156	0.5156	1.21251	1.69245	1.2715	0.5156	1.3782	2.8900	2.0275
0.0160	0.0160	0.0160	0.0160	0.5160	1.21564	1.69245	1.2715	0.5160	1.3782	2.8900	2.0275
0.0164	0.0164	0.0164	0.0164	0.5164	1.21877	1.69245	1.2715	0.5164	1.3782	2.8900	2.0275
0.0168	0.0168	0.0168	0.0168	0.5168	1.22190	1.69245	1.2715	0.5168	1.3782	2.8900	2.0275
0.0172	0.0172	0.0172	0.0172	0.5172	1.22503	1.69245	1.2715	0.5172	1.3782	2.8900	2.0275
0.0176	0.0176	0.0176	0.0176	0.5176	1.22816	1.69245	1.2715	0.5176	1.3782	2.8900	2.0275
0.0180	0.0180	0.0180	0.0180	0.5180	1.23129	1.69245	1.2715	0.5180	1.3782	2.8900	2.0275
0.0184	0.0184	0.0184	0.0184	0.5184	1.23442	1.69245	1.2715	0.5184	1.3782	2.8900	2.0275
0.0188	0.0188	0.0188	0.0188	0.5188	1.23755	1.69245	1.2715	0.5188	1.3782	2.8900	2.0275
0.0192	0.0192	0.0192	0.0192	0.5192	1.24068	1.69245	1.2715	0.5192	1.3782	2.8900	2.0275
0.0196	0.0196	0.0196	0.0196	0.5196	1.24381	1.69245	1.2715	0.5196	1.3782	2.8900	2.0275
0.0200	0.0200	0.0200	0.0200	0.5200	1.24694	1.69245	1.2715	0.5200	1.3782	2.8900	2.0275
0.0204	0.0204	0.0204	0.0204	0.5204	1.25007	1.69245	1.2715	0.5204	1.3782	2.8900	2.0275
0.0208	0.0208	0.0208	0.0208	0.5208	1.25320	1.69245	1.2715	0.5208	1.3782	2.8900	2.0275
0.0212	0.0212	0.0212	0.0212	0.5212	1.25633	1.69245	1.2715	0.5212	1.3782	2.8900	2.0275
0.0216	0.0216	0.0216	0.0216	0.5216	1.25946	1.69245	1.2715	0.5216	1.3782	2.8900	2.0275
0.0220	0.0220	0.0220	0.0220	0.5220	1.26259	1.69245	1.2715	0.5220	1.3782	2.8900	2.0275
0.0224	0.0224	0.0224	0.0224	0.5224	1.26572	1.69245	1.2715	0.5224	1.3782	2.8900	2.0275
0.0228	0.0228	0.0228	0.0228	0.5228	1.26885	1.69245	1.2715	0.5228	1.3782	2.8900	2.0275
0.0232	0.0232	0.0232	0.0232	0.5232	1.27198	1.69245	1.2715	0.5232	1.3782	2.8900	2.0275
0.0236	0.0236	0.0236	0.0236	0.5236	1.27511	1.69245	1.2715	0.5236	1.3782	2.8900	2.0275
0.0240	0.0240	0.0240	0.0240	0.5240	1.27824	1.69245	1.2715	0.5240	1.3782	2.8900	2.0275
0.0244	0.0244	0.0244	0.0244	0.5244	1.28137	1.69245	1.2715	0.5244	1.3782	2.8900	2.0275
0.0248	0.0248	0.0248	0.0248	0.5248	1.28450	1.69245	1.2715	0.5248	1.3782	2.8900	2.0275
0.0252	0.0252	0.0252	0.0252	0.5252	1.28763	1.69245	1.2715	0.5252	1.3782	2.8900	2.0275
0.0256	0.0256	0.0256	0.0256	0.5256	1.29076	1.69245	1.2715	0.5256	1.3782	2.8900	2.0275
0.0260	0.0260	0.0260	0.0260	0.5260	1.29389	1.69245	1.2715	0.5260	1.3782	2.8900	2.0275
0.0264	0.0264	0.0264	0.0264	0.5264	1.29702	1.69245	1.2715	0.5264	1.3782	2.8900	2.0275
0.0268	0.0268	0.0268	0.0268	0.5268	1.30015	1.69245	1.2715	0.5268	1.3782	2.8900	2.0275
0.0272	0.0272	0.0272	0.0272	0.5272	1.30328	1.69245	1.2715	0.5272	1.3782	2.8900	2.0275
0.0276	0.0276	0.0276	0.0276	0.5276	1.30641	1.69245	1.2715	0.5276	1.3782	2.8900	2.0275
0.0280	0.0280	0.0280	0.0280	0.5280	1.30954	1.69245	1.2715	0.5280	1.3782	2.8900	2.0275
0.0284	0.0284	0.0284	0.0284	0.5284	1.31267	1.69245	1.2715	0.5284	1.3782	2.8900	2.0275
0.0288	0.0288	0.0288	0.0288	0.5288	1.31580	1.69245	1.2715	0.5288	1.3782	2.8900	2.0275
0.0292	0.0292	0.0292	0.0292	0.5292	1.31893	1.69245	1.2715	0.5292	1.3782	2.8900	2.0275
0.0296	0.0296	0.0296	0.0296	0.5296	1.32206	1.69245	1.2715	0.5296	1.3782	2.8900	2.0275
0.0300	0.0300	0.0300	0.0300	0.5300	1.32519	1.69245	1.2715	0.5300	1.3782	2.8900	2.0275
0.0304	0.0304	0.0304	0.0304	0.5304	1.32832	1.69245	1.2715	0.5304	1.3782	2.8900	2.0275
0.0308	0.0308	0.0308	0.0308	0.5308	1.33145	1.69245	1.2715	0.5308	1.3782	2.8900	2.0275
0.0312	0.0312	0.0312	0.0312	0.5312	1.33458	1.69245	1.2715	0.5312	1.3782	2.8900	2.0275
0.0316	0.0316	0.0316	0.0316	0.5316	1.33771	1.69245	1.2715	0.5316	1.3782	2.8900	2.0275
0.0320	0.0320	0.0320	0.0320	0.5320	1.34084	1.69245	1.2715	0.5320	1.3782	2.8900	2.0275
0.0324	0.0324	0.0324	0.0324	0.5324	1.34397	1.69245	1.2715	0.5324	1.3782	2.8900	2.0275
0.0328	0.0328	0.0328	0.0328	0.5328	1.34710	1.69245	1.2715	0.5328	1.3782	2.8900	2.0275
0.0332	0.0332	0.0332	0.0332	0.5332	1.35023	1.69245	1.2715	0.5332	1.3782	2.8900	2.0275
0.0336	0.0336	0.0336	0.0336	0.5336	1.35336	1.69245	1.2715	0.5336	1.3782	2.8900	2.0275
0.0340	0.0340	0.0340	0.0340	0.5340	1.35649	1.69245	1.2715	0.5340	1.3782	2.8900	2.0275
0.0344	0.0344	0.0344	0.0344	0.5344	1.35962	1.69245	1.2715	0.5344	1.3782	2.8900	2.0275
0.0348	0										

$\alpha = 5/7$

x	$F_{5/7}(x)$	$H_{2/7}(x)$	$T_{5/7}(x)$	x	$F_{5/7}(x)$	$H_{2/7}(x)$	$T_{5/7}(x)$	x	$F_{5/7}(x)$	$H_{2/7}(x)$	$T_{5/7}(x)$
1.00000	1.00000	1.00000	2.00000	2.0	2.00000	1.00000	2.00000	6.0	1.00000	1.00000	2.00000
1.00000	1.00000	1.00000	2.00000	2.2	2.00000	1.00000	2.00000	6.2	1.00000	1.00000	2.00000
1.00000	1.00000	1.00000	2.00000	2.4	2.00000	1.00000	2.00000	6.4	1.00000	1.00000	2.00000
1.00000	1.00000	1.00000	2.00000	2.6	2.00000	1.00000	2.00000	6.6	1.00000	1.00000	2.00000
1.00000	1.00000	1.00000	2.00000	2.8	2.00000	1.00000	2.00000	6.8	1.00000	1.00000	2.00000
1.00000	1.00000	1.00000	2.00000	3.0	2.00000	1.00000	2.00000	7.0	1.00000	1.00000	2.00000
1.00000	1.00000	1.00000	2.00000	3.2	2.00000	1.00000	2.00000	7.2	1.00000	1.00000	2.00000
1.00000	1.00000	1.00000	2.00000	3.4	2.00000	1.00000	2.00000	7.4	1.00000	1.00000	2.00000
1.00000	1.00000	1.00000	2.00000	3.6	2.00000	1.00000	2.00000	7.6	1.00000	1.00000	2.00000
1.00000	1.00000	1.00000	2.00000	3.8	2.00000	1.00000	2.00000	7.8	1.00000	1.00000	2.00000
1.00000	1.00000	1.00000	2.00000	4.0	2.00000	1.00000	2.00000	8.0	1.00000	1.00000	2.00000
1.00000	1.00000	1.00000	2.00000	4.2	2.00000	1.00000	2.00000	8.2	1.00000	1.00000	2.00000
1.00000	1.00000	1.00000	2.00000	4.4	2.00000	1.00000	2.00000	8.4	1.00000	1.00000	2.00000
1.00000	1.00000	1.00000	2.00000	4.6	2.00000	1.00000	2.00000	8.6	1.00000	1.00000	2.00000
1.00000	1.00000	1.00000	2.00000	4.8	2.00000	1.00000	2.00000	8.8	1.00000	1.00000	2.00000
1.00000	1.00000	1.00000	2.00000	5.0	2.00000	1.00000	2.00000	9.0	1.00000	1.00000	2.00000
1.00000	1.00000	1.00000	2.00000	5.2	2.00000	1.00000	2.00000	9.2	1.00000	1.00000	2.00000
1.00000	1.00000	1.00000	2.00000	5.4	2.00000	1.00000	2.00000	9.4	1.00000	1.00000	2.00000
1.00000	1.00000	1.00000	2.00000	5.6	2.00000	1.00000	2.00000	9.6	1.00000	1.00000	2.00000
1.00000	1.00000	1.00000	2.00000	5.8	2.00000	1.00000	2.00000	9.8	1.00000	1.00000	2.00000
1.00000	1.00000	1.00000	2.00000	6.0	2.00000	1.00000	2.00000	10.0	1.00000	1.00000	2.00000

TABLE 13B. Lanchester-Clifford-Schlafli Functions $F_{\alpha}(x)$, $H_{1-\alpha}(x)$, and

$T_{\alpha}(x)$ for $\alpha = 5/7$ and x from 1.50 to 10.0.

$\alpha = 4/9$

x	$F_{4/9}(x)$	$H_{5/9}(x)$	$T_{4/9}(x)$	x	$F_{4/9}(x)$	$H_{5/9}(x)$	$T_{4/9}(x)$	x	$F_{4/9}(x)$	$H_{5/9}(x)$	$T_{4/9}(x)$
0.0000	1.00000	0.00000	0.00000	0.5000	1.14469	0.49145	0.35101	1.00	1.41287	0.97391	0.40384
0.0005	1.00009	0.00009	0.00009	0.5005	1.14529	0.49145	0.35101	1.01	1.41347	0.97451	0.40444
0.0010	1.00018	0.00018	0.00018	0.5010	1.14589	0.49145	0.35101	1.02	1.41407	0.97511	0.40504
0.0015	1.00027	0.00027	0.00027	0.5015	1.14649	0.49145	0.35101	1.03	1.41467	0.97571	0.40564
0.0020	1.00036	0.00036	0.00036	0.5020	1.14709	0.49145	0.35101	1.04	1.41527	0.97631	0.40624
0.0025	1.00045	0.00045	0.00045	0.5025	1.14769	0.49145	0.35101	1.05	1.41587	0.97691	0.40684
0.0030	1.00054	0.00054	0.00054	0.5030	1.14829	0.49145	0.35101	1.06	1.41647	0.97751	0.40744
0.0035	1.00063	0.00063	0.00063	0.5035	1.14889	0.49145	0.35101	1.07	1.41707	0.97811	0.40804
0.0040	1.00072	0.00072	0.00072	0.5040	1.14949	0.49145	0.35101	1.08	1.41767	0.97871	0.40864
0.0045	1.00081	0.00081	0.00081	0.5045	1.15009	0.49145	0.35101	1.09	1.41827	0.97931	0.40924
0.0050	1.00090	0.00090	0.00090	0.5050	1.15069	0.49145	0.35101	1.10	1.41887	0.97991	0.40984
0.0055	1.00099	0.00099	0.00099	0.5055	1.15129	0.49145	0.35101	1.11	1.41947	0.98051	0.41044
0.0060	1.00108	0.00108	0.00108	0.5060	1.15189	0.49145	0.35101	1.12	1.42007	0.98111	0.41104
0.0065	1.00117	0.00117	0.00117	0.5065	1.15249	0.49145	0.35101	1.13	1.42067	0.98171	0.41164
0.0070	1.00126	0.00126	0.00126	0.5070	1.15309	0.49145	0.35101	1.14	1.42127	0.98231	0.41224
0.0075	1.00135	0.00135	0.00135	0.5075	1.15369	0.49145	0.35101	1.15	1.42187	0.98291	0.41284
0.0080	1.00144	0.00144	0.00144	0.5080	1.15429	0.49145	0.35101	1.16	1.42247	0.98351	0.41344
0.0085	1.00153	0.00153	0.00153	0.5085	1.15489	0.49145	0.35101	1.17	1.42307	0.98411	0.41404
0.0090	1.00162	0.00162	0.00162	0.5090	1.15549	0.49145	0.35101	1.18	1.42367	0.98471	0.41464
0.0095	1.00171	0.00171	0.00171	0.5095	1.15609	0.49145	0.35101	1.19	1.42427	0.98531	0.41524
0.0100	1.00180	0.00180	0.00180	0.5100	1.15669	0.49145	0.35101	1.20	1.42487	0.98591	0.41584
0.0105	1.00189	0.00189	0.00189	0.5105	1.15729	0.49145	0.35101	1.21	1.42547	0.98651	0.41644
0.0110	1.00198	0.00198	0.00198	0.5110	1.15789	0.49145	0.35101	1.22	1.42607	0.98711	0.41704
0.0115	1.00207	0.00207	0.00207	0.5115	1.15849	0.49145	0.35101	1.23	1.42667	0.98771	0.41764
0.0120	1.00216	0.00216	0.00216	0.5120	1.15909	0.49145	0.35101	1.24	1.42727	0.98831	0.41824
0.0125	1.00225	0.00225	0.00225	0.5125	1.15969	0.49145	0.35101	1.25	1.42787	0.98891	0.41884
0.0130	1.00234	0.00234	0.00234	0.5130	1.16029	0.49145	0.35101	1.26	1.42847	0.98951	0.41944
0.0135	1.00243	0.00243	0.00243	0.5135	1.16089	0.49145	0.35101	1.27	1.42907	0.99011	0.42004
0.0140	1.00252	0.00252	0.00252	0.5140	1.16149	0.49145	0.35101	1.28	1.42967	0.99071	0.42064
0.0145	1.00261	0.00261	0.00261	0.5145	1.16209	0.49145	0.35101	1.29	1.43027	0.99131	0.42124
0.0150	1.00270	0.00270	0.00270	0.5150	1.16269	0.49145	0.35101	1.30	1.43087	0.99191	0.42184
0.0155	1.00279	0.00279	0.00279	0.5155	1.16329	0.49145	0.35101	1.31	1.43147	0.99251	0.42244
0.0160	1.00288	0.00288	0.00288	0.5160	1.16389	0.49145	0.35101	1.32	1.43207	0.99311	0.42304
0.0165	1.00297	0.00297	0.00297	0.5165	1.16449	0.49145	0.35101	1.33	1.43267	0.99371	0.42364
0.0170	1.00306	0.00306	0.00306	0.5170	1.16509	0.49145	0.35101	1.34	1.43327	0.99431	0.42424
0.0175	1.00315	0.00315	0.00315	0.5175	1.16569	0.49145	0.35101	1.35	1.43387	0.99491	0.42484
0.0180	1.00324	0.00324	0.00324	0.5180	1.16629	0.49145	0.35101	1.36	1.43447	0.99551	0.42544
0.0185	1.00333	0.00333	0.00333	0.5185	1.16689	0.49145	0.35101	1.37	1.43507	0.99611	0.42604
0.0190	1.00342	0.00342	0.00342	0.5190	1.16749	0.49145	0.35101	1.38	1.43567	0.99671	0.42664
0.0195	1.00351	0.00351	0.00351	0.5195	1.16809	0.49145	0.35101	1.39	1.43627	0.99731	0.42724
0.0200	1.00360	0.00360	0.00360	0.5200	1.16869	0.49145	0.35101	1.40	1.43687	0.99791	0.42784
0.0205	1.00369	0.00369	0.00369	0.5205	1.16929	0.49145	0.35101	1.41	1.43747	0.99851	0.42844
0.0210	1.00378	0.00378	0.00378	0.5210	1.16989	0.49145	0.35101	1.42	1.43807	0.99911	0.42904
0.0215	1.00387	0.00387	0.00387	0.5215	1.17049	0.49145	0.35101	1.43	1.43867	0.99971	0.42964
0.0220	1.00396	0.00396	0.00396	0.5220	1.17109	0.49145	0.35101	1.44	1.43927	0.99999	0.43024
0.0225	1.00405	0.00405	0.00405	0.5225	1.17169	0.49145	0.35101	1.45	1.43987	0.99999	0.43084
0.0230	1.00414	0.00414	0.00414	0.5230	1.17229	0.49145	0.35101	1.46	1.44047	0.99999	0.43144
0.0235	1.00423	0.00423	0.00423	0.5235	1.17289	0.49145	0.35101	1.47	1.44107	0.99999	0.43204
0.0240	1.00432	0.00432	0.00432	0.5240	1.17349	0.49145	0.35101	1.48	1.44167	0.99999	0.43264
0.0245	1.00441	0.00441	0.00441	0.5245	1.17409	0.49145	0.35101	1.49	1.44227	0.99999	0.43324
0.0250	1.00450	0.00450	0.00450	0.5250	1.17469	0.49145	0.35101	1.50	1.44287	0.99999	0.43384
0.0255	1.00459	0.00459	0.00459	0.5255	1.17529	0.49145	0.35101	1.50	1.44347	0.99999	0.43444
0.0260	1.00468	0.00468	0.00468	0.5260	1.17589	0.49145	0.35101	1.50	1.44407	0.99999	0.43504
0.0265	1.00477	0.00477	0.00477	0.5265	1.17649	0.49145	0.35101	1.50	1.44467	0.99999	0.43564
0.0270	1.00486	0.00486	0.00486	0.5270	1.17709	0.49145	0.35101	1.50	1.44527	0.99999	0.43624
0.0275	1.00495	0.00495	0.00495	0.5275	1.17769	0.49145	0.35101	1.50	1.44587	0.99999	0.43684
0.0280	1.00504	0.00504	0.00504	0.5280	1.17829	0.49145	0.35101	1.50	1.44647	0.99999	0.43744
0.0285	1.00513	0.00513	0.00513	0.5285	1.17889	0.49145	0.35101	1.50	1.44707	0.99999	0.43804
0.0290	1.00522	0.00522	0.00522	0.5290	1.17949	0.49145	0.35101	1.50	1.44767	0.99999	0.43864
0.0295	1.00531	0.00531	0.00531	0.5295	1.18009	0.49145	0.35101	1.50	1.44827	0.99999	0.43924
0.0300	1.00540	0.00540	0.00540	0.5300	1.18069	0.49145	0.35101	1.50	1.44887	0.99999	0.43984
0.0305	1.00549	0.00549	0.00549	0.5305	1.18129	0.49145	0.35101	1.50	1.44947	0.99999	0.44044
0.0310	1.00558	0.00558	0.00558	0.5310	1.18189	0.49145	0.35101	1.50	1.45007	0.99999	0.44104
0.0315	1.00567	0.00567	0.00567	0.5315	1.18249	0.49145	0.35101	1.50	1.45067	0.99999	0.44164
0.0320	1.00576	0.00576	0.00576	0.5320	1.18309	0.49145	0.35101	1.50	1.45127	0.99999	0.44224
0.0325	1.00585	0.00585	0.00585	0.5325	1.18369	0.49145	0.35101	1.50	1.45187	0.99999	0.44284
0.0330	1.00594	0.00594	0.00594	0.5330	1.18429	0.49145	0.35101	1.50	1.45247	0.99999	0.44344
0.0335	1.00603	0.00603	0.00603	0.5335	1.18489	0.49145	0.35101	1.50	1.45307	0.99999	0.44404
0.0340	1.00612	0.00612	0.00612	0.5340	1.18549	0.49145	0.35101	1.50	1.45367	0.99999	0.44464
0.0345	1.00621	0.00621	0.00621	0.5345	1.18609	0.49145	0.35101	1.50	1.45427	0.99999	0.44524
0.0350	1.00630	0.00630	0.00630	0.5350	1.18669	0.49145	0.35101	1.50	1.45487	0.99999	0.44584
0.0355	1.00639	0.00639	0.00639	0.5355	1.18729	0.49145	0.35101	1.50	1.45547	0.99999	0.44644
0.0360	1.00648	0.00648	0.00648	0.5360	1.18789	0.49145	0.35101	1.50	1.45607	0.99999	0.44704
0.0365	1.00657	0.00657	0.00657	0.5365	1.18849	0.49145	0.35101	1.50	1.45667	0.99999	0.44764
0.0370	1.00666	0.00666	0.00666	0.5370	1.18909	0.49145	0.35101	1.50	1.45727	0.99999	0.44824
0.0375	1.00675	0.00675	0.00675	0.5375	1.18969	0.49145	0.35101	1.50	1.45787	0.99999	0.44884
0.0380	1.00684	0.00684	0.00684	0.5380	1.19029	0.49145	0.35101	1.50	1.45847	0.99999	0.44944
0.0385	1.00693	0.00693	0.00693	0.5385	1.19089	0.49145	0.35101	1.50	1.45907	0.99999	0.45004
0.0390	1.00702	0.00702	0.00702	0.5390	1.19149	0.49145	0.35101	1.50	1.45967	0.99999	0.45064
0.0395	1.00711	0.00711	0.00711	0.5395	1.19209	0.49145	0.35101	1.50	1.46027	0.99999	0.45124
0.0400	1.00720	0.00720	0.00720	0.5400	1.19269	0.49145	0.35101	1.50	1.46087	0.99999	0.45184
0.0405	1.00729	0.00729	0.00729	0.5405	1.19329	0.49145	0.35101	1.50	1.46147	0.99999	0.45244
0.0410	1.00738	0.00738	0.00738	0.5410	1.19389	0.49145	0.35101	1.50	1.46207	0.99999	0.45304
0.0415	1.00747	0.00747	0.00747	0.5415	1.19449	0.49145	0.35101	1.50	1.46267	0.99999	0.45364
0.0420											

$\alpha = 5/9$

x	F _{5/9} (x)	H _{4/9} (x)	T _{5/9} (x)	x	F _{5/9} (x)	H _{4/9} (x)	T _{5/9} (x)	x	F _{5/9} (x)	H _{4/9} (x)	T _{5/9} (x)
1.00000	2.00000	3.00000	1.12999	6.0	3.45958	4.15995	1.20115	6.0	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.17000	6.1	3.47718	4.17000	1.20976	6.1	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.19110	6.2	3.49159	4.18869	1.21420	6.2	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.205	6.3	3.50419	4.20352	1.21646	6.3	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.21499	6.4	3.51459	4.21599	1.21781	6.4	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.22100	6.5	3.52259	4.22552	1.21846	6.5	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.22899	6.6	3.52859	4.23252	1.21899	6.6	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.23799	6.7	3.53259	4.23752	1.21946	6.7	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.24799	6.8	3.53559	4.24152	1.21981	6.8	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.25899	6.9	3.53759	4.24452	1.22016	6.9	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.27099	7.0	3.53859	4.24652	1.22046	7.0	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.28399	7.1	3.53959	4.24752	1.22076	7.1	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.29799	7.2	3.54059	4.24852	1.22106	7.2	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.31299	7.3	3.54159	4.24952	1.22136	7.3	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.32899	7.4	3.54259	4.25052	1.22166	7.4	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.34599	7.5	3.54359	4.25152	1.22196	7.5	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.36399	7.6	3.54459	4.25252	1.22226	7.6	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.38299	7.7	3.54559	4.25352	1.22256	7.7	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.40299	7.8	3.54659	4.25452	1.22286	7.8	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.42399	7.9	3.54759	4.25552	1.22316	7.9	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.44599	8.0	3.54859	4.25652	1.22346	8.0	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.46899	8.1	3.54959	4.25752	1.22376	8.1	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.49299	8.2	3.55059	4.25852	1.22406	8.2	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.51799	8.3	3.55159	4.25952	1.22436	8.3	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.54399	8.4	3.55259	4.26052	1.22466	8.4	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.57099	8.5	3.55359	4.26152	1.22496	8.5	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.59899	8.6	3.55459	4.26252	1.22526	8.6	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.62799	8.7	3.55559	4.26352	1.22556	8.7	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.65799	8.8	3.55659	4.26452	1.22586	8.8	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.68899	8.9	3.55759	4.26552	1.22616	8.9	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.72099	9.0	3.55859	4.26652	1.22646	9.0	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.75399	9.1	3.55959	4.26752	1.22676	9.1	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.78799	9.2	3.56059	4.26852	1.22706	9.2	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.82299	9.3	3.56159	4.26952	1.22736	9.3	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.85899	9.4	3.56259	4.27052	1.22766	9.4	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.89599	9.5	3.56359	4.27152	1.22796	9.5	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.93399	9.6	3.56459	4.27252	1.22826	9.6	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	1.97299	9.7	3.56559	4.27352	1.22856	9.7	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	2.01299	9.8	3.56659	4.27452	1.22886	9.8	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	2.05399	9.9	3.56759	4.27552	1.22916	9.9	12.13359	214.93339	1.24499
1.00000	2.00000	3.00000	2.09599	10.0	3.56859	4.27652	1.22946	10.0	12.13359	214.93339	1.24499
2.00000	3.45958	4.15995	1.20115	6.0	172.21345	214.40339	1.24499	10.0	91.20.46845	11355.21841	1.24500

TABLE 15B. Lanchester-Clifford-Schlafli Functions $F_{\alpha}(x)$, $H_{1-\alpha}(x)$, and $T_{\alpha}(x)$ for $\alpha = 5/9$ and x from 1.50 to 10.0.

$\alpha = 3/11$

x	F _{3/11} (x)	H _{8/11} (x)	T _{3/11} (x)	x	F _{3/11} (x)	H _{8/11} (x)	T _{3/11} (x)	x	F _{3/11} (x)	H _{8/11} (x)	T _{3/11} (x)
0.01	1.00009	0.00062	0.00002	0.51	1.23495	0.19755	0.15167	1.01	0.009	0.17771	0.28741
0.02	1.00017	0.00110	0.00016	0.52	1.24517	0.19558	0.15115	1.02	0.0235	0.17716	0.28920
0.03	1.00034	0.00206	0.00036	0.53	1.25467	0.19349	0.15060	1.03	0.0374	0.17649	0.29096
0.04	1.00059	0.00343	0.00064	0.54	1.26352	0.19129	0.15004	1.04	0.0507	0.17571	0.29269
0.05	1.00090	0.00513	0.00113	0.55	1.27184	0.18900	0.14947	1.05	0.0635	0.17483	0.29439
0.06	1.00126	0.00716	0.00174	0.56	1.27962	0.18662	0.14889	1.06	0.0758	0.17386	0.29605
0.07	1.00166	0.00953	0.00247	0.57	1.28687	0.18416	0.14830	1.07	0.0876	0.17280	0.29767
0.08	1.00209	0.01225	0.00332	0.58	1.29359	0.18162	0.14770	1.08	0.0989	0.17165	0.29925
0.09	1.00254	0.01528	0.00430	0.59	1.30078	0.17900	0.14709	1.09	0.1097	0.17041	0.30079
0.10	1.00300	0.01862	0.00541	0.60	1.30844	0.17632	0.14647	1.10	0.1200	0.16908	0.30229
0.11	1.00347	0.02227	0.00664	0.61	1.31657	0.17357	0.14584	1.11	0.1298	0.16767	0.30375
0.12	1.00394	0.02623	0.00800	0.62	1.32517	0.17074	0.14520	1.12	0.1391	0.16618	0.30517
0.13	1.00441	0.03049	0.00948	0.63	1.33424	0.16783	0.14455	1.13	0.1478	0.16461	0.30655
0.14	1.00488	0.03505	0.01108	0.64	1.34378	0.16484	0.14389	1.14	0.1560	0.16296	0.30789
0.15	1.00534	0.03991	0.01280	0.65	1.35379	0.16177	0.14322	1.15	0.1637	0.16123	0.30919
0.16	1.00579	0.04507	0.01464	0.66	1.36417	0.15862	0.14254	1.16	0.1709	0.15942	0.31045
0.17	1.00623	0.05053	0.01660	0.67	1.37492	0.15539	0.14185	1.17	0.1776	0.15753	0.31167
0.18	1.00666	0.05629	0.01868	0.68	1.38604	0.15209	0.14115	1.18	0.1838	0.15556	0.31285
0.19	1.00708	0.06235	0.02088	0.69	1.39753	0.14872	0.14044	1.19	0.1895	0.15351	0.31400
0.20	1.00749	0.06870	0.02319	0.70	1.40940	0.14518	0.13972	1.20	0.1947	0.15138	0.31512
0.21	1.00789	0.07533	0.02561	0.71	1.42165	0.14157	0.13899	1.21	0.1994	0.14917	0.31621
0.22	1.00828	0.08224	0.02814	0.72	1.43427	0.13789	0.13819	1.22	0.2036	0.14688	0.31727
0.23	1.00866	0.08942	0.03078	0.73	1.44726	0.13414	0.13737	1.23	0.2073	0.14451	0.31830
0.24	1.00903	0.09687	0.03353	0.74	1.46062	0.13032	0.13654	1.24	0.2105	0.14206	0.31930
0.25	1.00939	0.10458	0.03639	0.75	1.47435	0.12643	0.13570	1.25	0.2132	0.13953	0.32027
0.26	1.00974	0.11255	0.03936	0.76	1.48845	0.12247	0.13484	1.26	0.2154	0.13692	0.32121
0.27	1.01008	0.12077	0.04243	0.77	1.50292	0.11844	0.13397	1.27	0.2171	0.13423	0.32212
0.28	1.01041	0.12924	0.04561	0.78	1.51776	0.11434	0.13309	1.28	0.2183	0.13146	0.32300
0.29	1.01073	0.13795	0.04889	0.79	1.53296	0.11017	0.13224	1.29	0.2190	0.12861	0.32385
0.30	1.01104	0.14690	0.05227	0.80	1.54851	0.10593	0.13147	1.30	0.2192	0.12568	0.32467
0.31	1.01134	0.15608	0.05574	0.81	1.56441	0.10162	0.13068	1.31	0.2189	0.12267	0.32546
0.32	1.01163	0.16549	0.05930	0.82	1.58065	0.09724	0.12987	1.32	0.2181	0.11958	0.32622
0.33	1.01191	0.17512	0.06295	0.83	1.59723	0.09279	0.12904	1.33	0.2168	0.11641	0.32695
0.34	1.01218	0.18497	0.06668	0.84	1.61415	0.08827	0.12819	1.34	0.2150	0.11316	0.32765
0.35	1.01244	0.19503	0.07039	0.85	1.63141	0.08368	0.12732	1.35	0.2127	0.10983	0.32832
0.36	1.01269	0.20530	0.07408	0.86	1.64901	0.07902	0.12643	1.36	0.2100	0.10642	0.32896
0.37	1.01293	0.21577	0.07774	0.87	1.66694	0.07429	0.12552	1.37	0.2068	0.10293	0.32957
0.38	1.01316	0.22644	0.08137	0.88	1.68520	0.06949	0.12459	1.38	0.2031	0.09936	0.33015
0.39	1.01338	0.23730	0.08497	0.89	1.70379	0.06462	0.12363	1.39	0.1989	0.09571	0.33070
0.40	1.01359	0.24835	0.08853	0.90	1.72270	0.05968	0.12264	1.40	0.1942	0.09198	0.33122
0.41	1.01379	0.25958	0.09205	0.91	1.74193	0.05467	0.12162	1.41	0.1890	0.08817	0.33171
0.42	1.01398	0.27098	0.09553	0.92	1.76148	0.04959	0.12057	1.42	0.1833	0.08428	0.33217
0.43	1.01416	0.28254	0.09897	0.93	1.78135	0.04444	0.11950	1.43	0.1771	0.08031	0.33260
0.44	1.01433	0.29425	0.10236	0.94	1.80154	0.03921	0.11840	1.44	0.1704	0.07626	0.33300
0.45	1.01449	0.30611	0.10570	0.95	1.82204	0.03391	0.11727	1.45	0.1632	0.07212	0.33337
0.46	1.01464	0.31811	0.10899	0.96	1.84284	0.02854	0.11611	1.46	0.1555	0.06789	0.33371
0.47	1.01478	0.33024	0.11223	0.97	1.86394	0.02310	0.11492	1.47	0.1473	0.06358	0.33402
0.48	1.01491	0.34250	0.11541	0.98	1.88534	0.01759	0.11370	1.48	0.1386	0.05919	0.33430
0.49	1.01503	0.35488	0.11854	0.99	1.90703	0.01201	0.11245	1.49	0.1294	0.05472	0.33456
0.50	1.01514	0.36738	0.12161	1.00	2.01006	0.00637	0.11117	1.50	0.1197	0.05017	0.33479

TABLE 16A. Lanchester-Clifford-Schläfli Functions $F_\alpha(x)$, $H_{1-\alpha}(x)$, and $T_\alpha(x)$ for $\alpha = 3/11$ and x from 0.00 to 1.50.

$\alpha = 3/11$

x	$F_{3/11}(x)$	$H_{8/11}(x)$	$T_{3/11}(x)$	x	$F_{3/11}(x)$	$H_{8/11}(x)$	$T_{3/11}(x)$	x	$F_{3/11}(x)$	$H_{8/11}(x)$	$T_{3/11}(x)$
0.0000	0.3416	2.3306	0.3790	6.0	0.3790	2.3306	0.3790	6.0	0.3790	2.3306	0.3790
0.0005	0.3417	2.3307	0.3791	6.1	0.3791	2.3307	0.3791	6.1	0.3791	2.3307	0.3791
0.0010	0.3418	2.3308	0.3792	6.2	0.3792	2.3308	0.3792	6.2	0.3792	2.3308	0.3792
0.0015	0.3419	2.3309	0.3793	6.3	0.3793	2.3309	0.3793	6.3	0.3793	2.3309	0.3793
0.0020	0.3420	2.3310	0.3794	6.4	0.3794	2.3310	0.3794	6.4	0.3794	2.3310	0.3794
0.0025	0.3421	2.3311	0.3795	6.5	0.3795	2.3311	0.3795	6.5	0.3795	2.3311	0.3795
0.0030	0.3422	2.3312	0.3796	6.6	0.3796	2.3312	0.3796	6.6	0.3796	2.3312	0.3796
0.0035	0.3423	2.3313	0.3797	6.7	0.3797	2.3313	0.3797	6.7	0.3797	2.3313	0.3797
0.0040	0.3424	2.3314	0.3798	6.8	0.3798	2.3314	0.3798	6.8	0.3798	2.3314	0.3798
0.0045	0.3425	2.3315	0.3799	6.9	0.3799	2.3315	0.3799	6.9	0.3799	2.3315	0.3799
0.0050	0.3426	2.3316	0.3800	7.0	0.3800	2.3316	0.3800	7.0	0.3800	2.3316	0.3800
0.0055	0.3427	2.3317	0.3801	7.1	0.3801	2.3317	0.3801	7.1	0.3801	2.3317	0.3801
0.0060	0.3428	2.3318	0.3802	7.2	0.3802	2.3318	0.3802	7.2	0.3802	2.3318	0.3802
0.0065	0.3429	2.3319	0.3803	7.3	0.3803	2.3319	0.3803	7.3	0.3803	2.3319	0.3803
0.0070	0.3430	2.3320	0.3804	7.4	0.3804	2.3320	0.3804	7.4	0.3804	2.3320	0.3804
0.0075	0.3431	2.3321	0.3805	7.5	0.3805	2.3321	0.3805	7.5	0.3805	2.3321	0.3805
0.0080	0.3432	2.3322	0.3806	7.6	0.3806	2.3322	0.3806	7.6	0.3806	2.3322	0.3806
0.0085	0.3433	2.3323	0.3807	7.7	0.3807	2.3323	0.3807	7.7	0.3807	2.3323	0.3807
0.0090	0.3434	2.3324	0.3808	7.8	0.3808	2.3324	0.3808	7.8	0.3808	2.3324	0.3808
0.0095	0.3435	2.3325	0.3809	7.9	0.3809	2.3325	0.3809	7.9	0.3809	2.3325	0.3809
0.0100	0.3436	2.3326	0.3810	8.0	0.3810	2.3326	0.3810	8.0	0.3810	2.3326	0.3810
0.0105	0.3437	2.3327	0.3811	8.1	0.3811	2.3327	0.3811	8.1	0.3811	2.3327	0.3811
0.0110	0.3438	2.3328	0.3812	8.2	0.3812	2.3328	0.3812	8.2	0.3812	2.3328	0.3812
0.0115	0.3439	2.3329	0.3813	8.3	0.3813	2.3329	0.3813	8.3	0.3813	2.3329	0.3813
0.0120	0.3440	2.3330	0.3814	8.4	0.3814	2.3330	0.3814	8.4	0.3814	2.3330	0.3814
0.0125	0.3441	2.3331	0.3815	8.5	0.3815	2.3331	0.3815	8.5	0.3815	2.3331	0.3815
0.0130	0.3442	2.3332	0.3816	8.6	0.3816	2.3332	0.3816	8.6	0.3816	2.3332	0.3816
0.0135	0.3443	2.3333	0.3817	8.7	0.3817	2.3333	0.3817	8.7	0.3817	2.3333	0.3817
0.0140	0.3444	2.3334	0.3818	8.8	0.3818	2.3334	0.3818	8.8	0.3818	2.3334	0.3818
0.0145	0.3445	2.3335	0.3819	8.9	0.3819	2.3335	0.3819	8.9	0.3819	2.3335	0.3819
0.0150	0.3446	2.3336	0.3820	9.0	0.3820	2.3336	0.3820	9.0	0.3820	2.3336	0.3820
0.0155	0.3447	2.3337	0.3821	9.1	0.3821	2.3337	0.3821	9.1	0.3821	2.3337	0.3821
0.0160	0.3448	2.3338	0.3822	9.2	0.3822	2.3338	0.3822	9.2	0.3822	2.3338	0.3822
0.0165	0.3449	2.3339	0.3823	9.3	0.3823	2.3339	0.3823	9.3	0.3823	2.3339	0.3823
0.0170	0.3450	2.3340	0.3824	9.4	0.3824	2.3340	0.3824	9.4	0.3824	2.3340	0.3824
0.0175	0.3451	2.3341	0.3825	9.5	0.3825	2.3341	0.3825	9.5	0.3825	2.3341	0.3825
0.0180	0.3452	2.3342	0.3826	9.6	0.3826	2.3342	0.3826	9.6	0.3826	2.3342	0.3826
0.0185	0.3453	2.3343	0.3827	9.7	0.3827	2.3343	0.3827	9.7	0.3827	2.3343	0.3827
0.0190	0.3454	2.3344	0.3828	9.8	0.3828	2.3344	0.3828	9.8	0.3828	2.3344	0.3828
0.0195	0.3455	2.3345	0.3829	9.9	0.3829	2.3345	0.3829	9.9	0.3829	2.3345	0.3829
0.0200	0.3456	2.3346	0.3830	10.0	0.3830	2.3346	0.3830	10.0	0.3830	2.3346	0.3830

TABLE 16B. Lanchester-Clifford-Schlafli Functions $F_{\alpha}(x)$, $H_{1-\alpha}(x)$, and

$T_{\alpha}(x)$ for $\alpha = 3/11$ and x from 1.50 to 10.0.

$\alpha = 5/11$

x	F _{5/11} (x)	H _{6/11} (x)	T _{5/11} (x)	x	F _{5/11} (x)	H _{6/11} (x)	T _{5/11} (x)	x	F _{5/11} (x)	H _{6/11} (x)	T _{5/11} (x)
0.01	1.00000	0.00000	0.00000	0.51	1.49288	0.7041	0.39880	1.01	1.59890	1.00992	0.62974
0.02	1.00004	0.00104	0.00566	0.52	1.49281	0.70402	0.39875	1.02	1.61198	1.01023	0.63449
0.03	1.00008	0.00210	0.01187	0.53	1.15221	0.4042	0.39887	1.03	1.62491	1.01054	0.63899
0.04	1.00018	0.00317	0.01874	0.54	1.16444	0.4042	0.39895	1.04	1.63785	1.01085	0.64322
0.05	1.00118	0.00429	0.02627	0.55	1.17718	0.4049	0.40197	1.05	1.65079	1.01116	0.64738
0.06	1.00270	0.00547	0.03452	0.56	1.18974	0.4104	0.40822	1.06	1.66373	1.01147	0.65142
0.07	1.00483	0.00671	0.04359	0.57	1.19943	0.51135	0.41444	1.07	1.67667	1.01178	0.65538
0.08	1.00746	0.00801	0.05349	0.58	1.19725	0.51175	0.42066	1.08	1.68961	1.01209	0.65925
0.09	1.01158	0.00937	0.06424	0.59	1.20230	0.52372	0.42688	1.09	1.70255	1.01240	0.66302
0.10	1.01720	0.01079	0.07670	0.60	1.21358	0.53570	0.43310	1.10	1.71550	1.01271	0.66679
0.11	1.02433	0.01227	0.09093	0.61	1.22332	0.54767	0.43932	1.11	1.72845	1.01302	0.67056
0.12	1.03307	0.01380	0.10697	0.62	1.23332	0.55964	0.44554	1.12	1.74140	1.01333	0.67433
0.13	1.04352	0.01538	0.12484	0.63	1.24268	0.57161	0.45176	1.13	1.75435	1.01364	0.67810
0.14	1.05578	0.01701	0.14457	0.64	1.25159	0.58358	0.45798	1.14	1.76730	1.01395	0.68187
0.15	1.07095	0.01869	0.16619	0.65	1.25997	0.59555	0.46420	1.15	1.78025	1.01426	0.68564
0.16	1.08913	0.02042	0.18974	0.66	1.26688	0.60752	0.47042	1.16	1.79320	1.01457	0.68941
0.17	1.11042	0.02220	0.21627	0.67	1.27274	0.61949	0.47664	1.17	1.80615	1.01488	0.69318
0.18	1.13493	0.02403	0.24584	0.68	1.27744	0.63146	0.48286	1.18	1.81910	1.01519	0.69695
0.19	1.16276	0.02591	0.27854	0.69	1.28104	0.64343	0.48908	1.19	1.83205	1.01550	0.70072
0.20	1.19401	0.02784	0.31447	0.70	1.28357	0.65540	0.49530	1.20	1.84500	1.01581	0.70449
0.21	1.22978	0.02982	0.35378	0.71	1.28607	0.66737	0.50152	1.21	1.85795	1.01612	0.70826
0.22	1.27013	0.03185	0.39654	0.72	1.28854	0.67934	0.50774	1.22	1.87090	1.01643	0.71203
0.23	1.31606	0.03393	0.44281	0.73	1.29095	0.69131	0.51396	1.23	1.88385	1.01674	0.71580
0.24	1.36757	0.03606	0.49264	0.74	1.29332	0.70328	0.52018	1.24	1.89680	1.01705	0.71957
0.25	1.42466	0.03824	0.54609	0.75	1.29562	0.71525	0.52640	1.25	1.90975	1.01736	0.72334
0.26	1.48733	0.04047	0.60322	0.76	1.29787	0.72722	0.53262	1.26	1.92270	1.01767	0.72711
0.27	1.55558	0.04275	0.66409	0.77	1.29997	0.73919	0.53884	1.27	1.93565	1.01798	0.73088
0.28	1.62941	0.04508	0.72874	0.78	1.30205	0.75116	0.54506	1.28	1.94860	1.01829	0.73465
0.29	1.70882	0.04746	0.79721	0.79	1.30406	0.76313	0.55128	1.29	1.96155	1.01860	0.73842
0.30	1.79383	0.04989	0.86944	0.80	1.30606	0.77510	0.55750	1.30	1.97450	1.01891	0.74219
0.31	1.88444	0.05237	0.94547	0.81	1.30806	0.78707	0.56372	1.31	1.98745	1.01922	0.74596
0.32	1.98065	0.05490	1.02524	0.82	1.31006	0.79904	0.56994	1.32	1.99990	1.01953	0.74973
0.33	2.08246	0.05748	1.10871	0.83	1.31206	0.81101	0.57616	1.33	2.01235	1.01984	0.75350
0.34	2.19087	0.06011	1.19594	0.84	1.31406	0.82298	0.58238	1.34	2.02480	1.02015	0.75727
0.35	2.30588	0.06279	1.28699	0.85	1.31606	0.83495	0.58860	1.35	2.03725	1.02046	0.76104
0.36	2.42749	0.06552	1.38184	0.86	1.31806	0.84692	0.59482	1.36	2.04970	1.02077	0.76481
0.37	2.55570	0.06830	1.48047	0.87	1.32006	0.85889	0.60104	1.37	2.06215	1.02108	0.76858
0.38	2.69051	0.07113	1.58287	0.88	1.32206	0.87086	0.60726	1.38	2.07460	1.02139	0.77235
0.39	2.83192	0.07401	1.68902	0.89	1.32406	0.88283	0.61348	1.39	2.08705	1.02170	0.77612
0.40	2.98003	0.07694	1.79891	0.90	1.32606	0.89480	0.61970	1.40	2.10000	1.02201	0.77989
0.41	3.13484	0.07992	1.91254	0.91	1.32806	0.90677	0.62592	1.41	2.11295	1.02232	0.78366
0.42	3.29635	0.08295	2.02991	0.92	1.33006	0.91874	0.63214	1.42	2.12590	1.02263	0.78743
0.43	3.46456	0.08603	2.15104	0.93	1.33206	0.93071	0.63836	1.43	2.13885	1.02294	0.79120
0.44	3.63947	0.08916	2.27591	0.94	1.33406	0.94268	0.64458	1.44	2.15180	1.02325	0.79497
0.45	3.82108	0.09234	2.40454	0.95	1.33606	0.95465	0.65080	1.45	2.16475	1.02356	0.79874
0.46	4.00939	0.09557	2.53691	0.96	1.33806	0.96662	0.65702	1.46	2.17770	1.02387	0.80251
0.47	4.20450	0.09885	2.67304	0.97	1.34006	0.97859	0.66324	1.47	2.19065	1.02418	0.80628
0.48	4.40661	0.10218	2.81291	0.98	1.34206	0.99056	0.66946	1.48	2.20360	1.02449	0.81005
0.49	4.61572	0.10556	2.95654	0.99	1.34406	1.00253	0.67568	1.49	2.21655	1.02480	0.81382
0.50	4.83193	0.10899	3.10391	1.00	1.34606	1.01450	0.68190	1.50	2.22950	1.02511	0.81759

TABLE 17A. Lanchester-Clifford-Schlöffli Functions $F_\alpha(x)$, $H_{1-\alpha}(x)$, and

$T_\alpha(x)$ for $\alpha = 5/11$ and x from 0.00 to 1.50.

$\alpha = 8/11$

x	$F_{8/11}(x)$	$H_{3/11}(x)$	$T_{8/11}(x)$	x	$F_{8/11}(x)$	$H_{3/11}(x)$	$T_{8/11}(x)$	x	$F_{8/11}(x)$	$H_{3/11}(x)$	$T_{8/11}(x)$
0.0000	1.0000	4.70093	2.44333	0.0000	2.82508	7.24991	2.56627	6.0000	113.24997	298.00235	2.63141
0.0005	1.0000	4.71055	2.44333	0.0005	2.83005	7.25134	2.56627	6.0005	113.24997	298.00235	2.63141
0.0010	1.0000	4.72017	2.44333	0.0010	2.83502	7.25277	2.56627	6.0010	113.24997	298.00235	2.63141
0.0015	1.0000	4.72979	2.44333	0.0015	2.84000	7.25420	2.56627	6.0015	113.24997	298.00235	2.63141
0.0020	1.0000	4.73941	2.44333	0.0020	2.84500	7.25563	2.56627	6.0020	113.24997	298.00235	2.63141
0.0025	1.0000	4.74903	2.44333	0.0025	2.85000	7.25706	2.56627	6.0025	113.24997	298.00235	2.63141
0.0030	1.0000	4.75865	2.44333	0.0030	2.85500	7.25849	2.56627	6.0030	113.24997	298.00235	2.63141
0.0035	1.0000	4.76827	2.44333	0.0035	2.86000	7.25992	2.56627	6.0035	113.24997	298.00235	2.63141
0.0040	1.0000	4.77789	2.44333	0.0040	2.86500	7.26135	2.56627	6.0040	113.24997	298.00235	2.63141
0.0045	1.0000	4.78751	2.44333	0.0045	2.87000	7.26278	2.56627	6.0045	113.24997	298.00235	2.63141
0.0050	1.0000	4.79713	2.44333	0.0050	2.87500	7.26421	2.56627	6.0050	113.24997	298.00235	2.63141
0.0055	1.0000	4.80675	2.44333	0.0055	2.88000	7.26564	2.56627	6.0055	113.24997	298.00235	2.63141
0.0060	1.0000	4.81637	2.44333	0.0060	2.88500	7.26707	2.56627	6.0060	113.24997	298.00235	2.63141
0.0065	1.0000	4.82599	2.44333	0.0065	2.89000	7.26850	2.56627	6.0065	113.24997	298.00235	2.63141
0.0070	1.0000	4.83561	2.44333	0.0070	2.89500	7.26993	2.56627	6.0070	113.24997	298.00235	2.63141
0.0075	1.0000	4.84523	2.44333	0.0075	2.90000	7.27136	2.56627	6.0075	113.24997	298.00235	2.63141
0.0080	1.0000	4.85485	2.44333	0.0080	2.90500	7.27279	2.56627	6.0080	113.24997	298.00235	2.63141
0.0085	1.0000	4.86447	2.44333	0.0085	2.91000	7.27422	2.56627	6.0085	113.24997	298.00235	2.63141
0.0090	1.0000	4.87409	2.44333	0.0090	2.91500	7.27565	2.56627	6.0090	113.24997	298.00235	2.63141
0.0095	1.0000	4.88371	2.44333	0.0095	2.92000	7.27708	2.56627	6.0095	113.24997	298.00235	2.63141
0.0100	1.0000	4.89333	2.44333	0.0100	2.92500	7.27851	2.56627	6.0100	113.24997	298.00235	2.63141
0.0105	1.0000	4.90295	2.44333	0.0105	2.93000	7.27994	2.56627	6.0105	113.24997	298.00235	2.63141
0.0110	1.0000	4.91257	2.44333	0.0110	2.93500	7.28137	2.56627	6.0110	113.24997	298.00235	2.63141
0.0115	1.0000	4.92219	2.44333	0.0115	2.94000	7.28280	2.56627	6.0115	113.24997	298.00235	2.63141
0.0120	1.0000	4.93181	2.44333	0.0120	2.94500	7.28423	2.56627	6.0120	113.24997	298.00235	2.63141
0.0125	1.0000	4.94143	2.44333	0.0125	2.95000	7.28566	2.56627	6.0125	113.24997	298.00235	2.63141
0.0130	1.0000	4.95105	2.44333	0.0130	2.95500	7.28709	2.56627	6.0130	113.24997	298.00235	2.63141
0.0135	1.0000	4.96067	2.44333	0.0135	2.96000	7.28852	2.56627	6.0135	113.24997	298.00235	2.63141
0.0140	1.0000	4.97029	2.44333	0.0140	2.96500	7.28995	2.56627	6.0140	113.24997	298.00235	2.63141
0.0145	1.0000	4.97991	2.44333	0.0145	2.97000	7.29138	2.56627	6.0145	113.24997	298.00235	2.63141
0.0150	1.0000	4.98953	2.44333	0.0150	2.97500	7.29281	2.56627	6.0150	113.24997	298.00235	2.63141
0.0155	1.0000	4.99915	2.44333	0.0155	2.98000	7.29424	2.56627	6.0155	113.24997	298.00235	2.63141
0.0160	1.0000	5.00877	2.44333	0.0160	2.98500	7.29567	2.56627	6.0160	113.24997	298.00235	2.63141
0.0165	1.0000	5.01839	2.44333	0.0165	2.99000	7.29710	2.56627	6.0165	113.24997	298.00235	2.63141
0.0170	1.0000	5.02801	2.44333	0.0170	2.99500	7.29853	2.56627	6.0170	113.24997	298.00235	2.63141
0.0175	1.0000	5.03763	2.44333	0.0175	3.00000	7.29996	2.56627	6.0175	113.24997	298.00235	2.63141
0.0180	1.0000	5.04725	2.44333	0.0180	3.00500	7.30139	2.56627	6.0180	113.24997	298.00235	2.63141
0.0185	1.0000	5.05687	2.44333	0.0185	3.01000	7.30282	2.56627	6.0185	113.24997	298.00235	2.63141
0.0190	1.0000	5.06649	2.44333	0.0190	3.01500	7.30425	2.56627	6.0190	113.24997	298.00235	2.63141
0.0195	1.0000	5.07611	2.44333	0.0195	3.02000	7.30568	2.56627	6.0195	113.24997	298.00235	2.63141
0.0200	1.0000	5.08573	2.44333	0.0200	3.02500	7.30711	2.56627	6.0200	113.24997	298.00235	2.63141
0.0205	1.0000	5.09535	2.44333	0.0205	3.03000	7.30854	2.56627	6.0205	113.24997	298.00235	2.63141
0.0210	1.0000	5.10497	2.44333	0.0210	3.03500	7.30997	2.56627	6.0210	113.24997	298.00235	2.63141
0.0215	1.0000	5.11459	2.44333	0.0215	3.04000	7.31140	2.56627	6.0215	113.24997	298.00235	2.63141
0.0220	1.0000	5.12421	2.44333	0.0220	3.04500	7.31283	2.56627	6.0220	113.24997	298.00235	2.63141
0.0225	1.0000	5.13383	2.44333	0.0225	3.05000	7.31426	2.56627	6.0225	113.24997	298.00235	2.63141
0.0230	1.0000	5.14345	2.44333	0.0230	3.05500	7.31569	2.56627	6.0230	113.24997	298.00235	2.63141
0.0235	1.0000	5.15307	2.44333	0.0235	3.06000	7.31712	2.56627	6.0235	113.24997	298.00235	2.63141
0.0240	1.0000	5.16269	2.44333	0.0240	3.06500	7.31855	2.56627	6.0240	113.24997	298.00235	2.63141
0.0245	1.0000	5.17231	2.44333	0.0245	3.07000	7.31998	2.56627	6.0245	113.24997	298.00235	2.63141
0.0250	1.0000	5.18193	2.44333	0.0250	3.07500	7.32141	2.56627	6.0250	113.24997	298.00235	2.63141
0.0255	1.0000	5.19155	2.44333	0.0255	3.08000	7.32284	2.56627	6.0255	113.24997	298.00235	2.63141
0.0260	1.0000	5.20117	2.44333	0.0260	3.08500	7.32427	2.56627	6.0260	113.24997	298.00235	2.63141
0.0265	1.0000	5.21079	2.44333	0.0265	3.09000	7.32570	2.56627	6.0265	113.24997	298.00235	2.63141
0.0270	1.0000	5.22041	2.44333	0.0270	3.09500	7.32713	2.56627	6.0270	113.24997	298.00235	2.63141
0.0275	1.0000	5.23003	2.44333	0.0275	3.10000	7.32856	2.56627	6.0275	113.24997	298.00235	2.63141
0.0280	1.0000	5.23965	2.44333	0.0280	3.10500	7.32999	2.56627	6.0280	113.24997	298.00235	2.63141
0.0285	1.0000	5.24927	2.44333	0.0285	3.11000	7.33142	2.56627	6.0285	113.24997	298.00235	2.63141
0.0290	1.0000	5.25889	2.44333	0.0290	3.11500	7.33285	2.56627	6.0290	113.24997	298.00235	2.63141
0.0295	1.0000	5.26851	2.44333	0.0295	3.12000	7.33428	2.56627	6.0295	113.24997	298.00235	2.63141
0.0300	1.0000	5.27813	2.44333	0.0300	3.12500	7.33571	2.56627	6.0300	113.24997	298.00235	2.63141
0.0305	1.0000	5.28775	2.44333	0.0305	3.13000	7.33714	2.56627	6.0305	113.24997	298.00235	2.63141
0.0310	1.0000	5.29737	2.44333	0.0310	3.13500	7.33857	2.56627	6.0310	113.24997	298.00235	2.63141
0.0315	1.0000	5.30699	2.44333	0.0315	3.14000	7.33999	2.56627	6.0315	113.24997	298.00235	2.63141
0.0320	1.0000	5.31661	2.44333	0.0320	3.14500	7.34142	2.56627	6.0320	113.24997	298.00235	2.63141
0.0325	1.0000	5.32623	2.44333	0.0325	3.15000	7.34285	2.56627	6.0325	113.24997	298.00235	2.63141
0.0330	1.0000	5.33585	2.44333	0.0330	3.15500	7.34428	2.56627	6.0330	113.24997	298.00235	2.63141
0.0335	1.0000	5.34547	2.44333	0.0335	3.16000	7.34571	2.56627	6.0335	113.24997	298.00235	2.63141
0.0340	1.0000	5.35509	2.44333	0.0340	3.16500	7.34714	2.56627	6.0340	113.24997	298.00235	2.63141
0.0345	1.0000	5.36471	2.44333	0.0345	3.17000	7.34857	2.56627	6.0345	113.24997	298.00235	2.63141
0.0350	1.0000	5.37433	2.44333	0.0350	3.17500	7.34999	2.56627	6.0350	113.24997	298.00235	2.63141
0.0355	1.0000	5.38395	2.44333	0.0355	3.18000	7.35142	2.56627	6.0355	113.24997	298.00235	2.63141
0.0360	1.0000	5.39357	2.44333	0.0360	3.18500	7.35285	2.56627	6.0360	113.24997	298.00235	2.63141
0.0365	1.0000	5.40319	2.44333	0.0365	3.19000	7.35428	2.56627	6.0365	113.24997	298.00235	2.63141
0.0370	1.0000	5.41281	2.44333	0.0370	3.19500	7.35571	2.56627	6.0370	113.24997	298.00235	2.63141
0.0375	1.0000	5.42243	2.44333	0.0375	3.20000	7.35714	2.56627	6.0375	113.24997	298.00235	2.63141
0.0380	1.0000	5.43205	2.44333	0.0380	3.20500	7.35857	2.56627	6.0380	113.24997	298.00235	2.63141
0.0385	1.0000	5.44167	2.44333	0.0385	3.21000	7.35999	2.56627	6.0385	113.24997	298.00235	2.63141
0.0390	1.0000	5.45129	2.44333	0.0390	3.21500	7.36142	2.56627	6.0390	113.24997	298.00235	2.63141
0.0395	1.0000	5.46091	2.44333	0.0395	3.22000	7.36285	2.56627	6.0395	113.24997	298.00235	2.63141
0.0400	1.0000	5.47053	2.44333	0.0400	3.22500	7.36428	2.56627	6.0400	113.24997	298.00235	2.63141
0.0405	1.0000	5.48									

$\alpha = 5/13$

x	$F_{5/13}(x)$	$H_{8/13}(x)$	$T_{5/13}(x)$	x	$F_{5/13}(x)$	$H_{8/13}(x)$	$T_{5/13}(x)$	x	$F_{5/13}(x)$	$H_{8/13}(x)$	$T_{5/13}(x)$
0.0000	1.0000	0.0000	0.0000	0.0000	1.0000	0.0000	0.0000	1.0000	1.7071	0.8079	0.7071
0.0005	1.0007	0.0009	0.0009	0.0005	1.0007	0.0009	0.0009	1.0005	1.7073	0.8081	0.7073
0.0010	1.0014	0.0018	0.0017	0.0010	1.0014	0.0018	0.0017	1.0009	1.7075	0.8083	0.7075
0.0015	1.0021	0.0027	0.0026	0.0015	1.0021	0.0027	0.0026	1.0014	1.7077	0.8085	0.7077
0.0020	1.0029	0.0036	0.0035	0.0020	1.0029	0.0036	0.0035	1.0019	1.7079	0.8087	0.7079
0.0025	1.0037	0.0045	0.0044	0.0025	1.0037	0.0045	0.0044	1.0024	1.7081	0.8089	0.7081
0.0030	1.0045	0.0054	0.0053	0.0030	1.0045	0.0054	0.0053	1.0029	1.7083	0.8091	0.7083
0.0035	1.0053	0.0063	0.0062	0.0035	1.0053	0.0063	0.0062	1.0034	1.7085	0.8093	0.7085
0.0040	1.0061	0.0072	0.0071	0.0040	1.0061	0.0072	0.0071	1.0039	1.7087	0.8095	0.7087
0.0045	1.0069	0.0081	0.0080	0.0045	1.0069	0.0081	0.0080	1.0044	1.7089	0.8097	0.7089
0.0050	1.0077	0.0090	0.0089	0.0050	1.0077	0.0090	0.0089	1.0049	1.7091	0.8099	0.7091
0.0055	1.0085	0.0099	0.0098	0.0055	1.0085	0.0099	0.0098	1.0054	1.7093	0.8101	0.7093
0.0060	1.0093	0.0108	0.0107	0.0060	1.0093	0.0108	0.0107	1.0059	1.7095	0.8103	0.7095
0.0065	1.0101	0.0117	0.0116	0.0065	1.0101	0.0117	0.0116	1.0064	1.7097	0.8105	0.7097
0.0070	1.0109	0.0126	0.0125	0.0070	1.0109	0.0126	0.0125	1.0069	1.7099	0.8107	0.7099
0.0075	1.0117	0.0135	0.0134	0.0075	1.0117	0.0135	0.0134	1.0074	1.7101	0.8109	0.7101
0.0080	1.0125	0.0144	0.0143	0.0080	1.0125	0.0144	0.0143	1.0079	1.7103	0.8111	0.7103
0.0085	1.0133	0.0153	0.0152	0.0085	1.0133	0.0153	0.0152	1.0084	1.7105	0.8113	0.7105
0.0090	1.0141	0.0162	0.0161	0.0090	1.0141	0.0162	0.0161	1.0089	1.7107	0.8115	0.7107
0.0095	1.0149	0.0171	0.0170	0.0095	1.0149	0.0171	0.0170	1.0094	1.7109	0.8117	0.7109
0.0100	1.0157	0.0180	0.0179	0.0100	1.0157	0.0180	0.0179	1.0099	1.7111	0.8119	0.7111
0.0105	1.0165	0.0189	0.0188	0.0105	1.0165	0.0189	0.0188	1.0104	1.7113	0.8121	0.7113
0.0110	1.0173	0.0198	0.0197	0.0110	1.0173	0.0198	0.0197	1.0109	1.7115	0.8123	0.7115
0.0115	1.0181	0.0207	0.0206	0.0115	1.0181	0.0207	0.0206	1.0114	1.7117	0.8125	0.7117
0.0120	1.0189	0.0216	0.0215	0.0120	1.0189	0.0216	0.0215	1.0119	1.7119	0.8127	0.7119
0.0125	1.0197	0.0225	0.0224	0.0125	1.0197	0.0225	0.0224	1.0124	1.7121	0.8129	0.7121
0.0130	1.0205	0.0234	0.0233	0.0130	1.0205	0.0234	0.0233	1.0129	1.7123	0.8131	0.7123
0.0135	1.0213	0.0243	0.0242	0.0135	1.0213	0.0243	0.0242	1.0134	1.7125	0.8133	0.7125
0.0140	1.0221	0.0252	0.0251	0.0140	1.0221	0.0252	0.0251	1.0139	1.7127	0.8135	0.7127
0.0145	1.0229	0.0261	0.0260	0.0145	1.0229	0.0261	0.0260	1.0144	1.7129	0.8137	0.7129
0.0150	1.0237	0.0270	0.0269	0.0150	1.0237	0.0270	0.0269	1.0149	1.7131	0.8139	0.7131
0.0155	1.0245	0.0279	0.0278	0.0155	1.0245	0.0279	0.0278	1.0154	1.7133	0.8141	0.7133
0.0160	1.0253	0.0288	0.0287	0.0160	1.0253	0.0288	0.0287	1.0159	1.7135	0.8143	0.7135
0.0165	1.0261	0.0297	0.0296	0.0165	1.0261	0.0297	0.0296	1.0164	1.7137	0.8145	0.7137
0.0170	1.0269	0.0306	0.0305	0.0170	1.0269	0.0306	0.0305	1.0169	1.7139	0.8147	0.7139
0.0175	1.0277	0.0315	0.0314	0.0175	1.0277	0.0315	0.0314	1.0174	1.7141	0.8149	0.7141
0.0180	1.0285	0.0324	0.0323	0.0180	1.0285	0.0324	0.0323	1.0179	1.7143	0.8151	0.7143
0.0185	1.0293	0.0333	0.0332	0.0185	1.0293	0.0333	0.0332	1.0184	1.7145	0.8153	0.7145
0.0190	1.0301	0.0342	0.0341	0.0190	1.0301	0.0342	0.0341	1.0189	1.7147	0.8155	0.7147
0.0195	1.0309	0.0351	0.0350	0.0195	1.0309	0.0351	0.0350	1.0194	1.7149	0.8157	0.7149
0.0200	1.0317	0.0360	0.0359	0.0200	1.0317	0.0360	0.0359	1.0199	1.7151	0.8159	0.7151
0.0205	1.0325	0.0369	0.0368	0.0205	1.0325	0.0369	0.0368	1.0204	1.7153	0.8161	0.7153
0.0210	1.0333	0.0378	0.0377	0.0210	1.0333	0.0378	0.0377	1.0209	1.7155	0.8163	0.7155
0.0215	1.0341	0.0387	0.0386	0.0215	1.0341	0.0387	0.0386	1.0214	1.7157	0.8165	0.7157
0.0220	1.0349	0.0396	0.0395	0.0220	1.0349	0.0396	0.0395	1.0219	1.7159	0.8167	0.7159
0.0225	1.0357	0.0405	0.0404	0.0225	1.0357	0.0405	0.0404	1.0224	1.7161	0.8169	0.7161
0.0230	1.0365	0.0414	0.0413	0.0230	1.0365	0.0414	0.0413	1.0229	1.7163	0.8171	0.7163
0.0235	1.0373	0.0423	0.0422	0.0235	1.0373	0.0423	0.0422	1.0234	1.7165	0.8173	0.7165
0.0240	1.0381	0.0432	0.0431	0.0240	1.0381	0.0432	0.0431	1.0239	1.7167	0.8175	0.7167
0.0245	1.0389	0.0441	0.0440	0.0245	1.0389	0.0441	0.0440	1.0244	1.7169	0.8177	0.7169
0.0250	1.0397	0.0450	0.0449	0.0250	1.0397	0.0450	0.0449	1.0249	1.7171	0.8179	0.7171
0.0255	1.0405	0.0459	0.0458	0.0255	1.0405	0.0459	0.0458	1.0254	1.7173	0.8181	0.7173
0.0260	1.0413	0.0468	0.0467	0.0260	1.0413	0.0468	0.0467	1.0259	1.7175	0.8183	0.7175
0.0265	1.0421	0.0477	0.0476	0.0265	1.0421	0.0477	0.0476	1.0264	1.7177	0.8185	0.7177
0.0270	1.0429	0.0486	0.0485	0.0270	1.0429	0.0486	0.0485	1.0269	1.7179	0.8187	0.7179
0.0275	1.0437	0.0495	0.0494	0.0275	1.0437	0.0495	0.0494	1.0274	1.7181	0.8189	0.7181
0.0280	1.0445	0.0504	0.0503	0.0280	1.0445	0.0504	0.0503	1.0279	1.7183	0.8191	0.7183
0.0285	1.0453	0.0513	0.0512	0.0285	1.0453	0.0513	0.0512	1.0284	1.7185	0.8193	0.7185
0.0290	1.0461	0.0522	0.0521	0.0290	1.0461	0.0522	0.0521	1.0289	1.7187	0.8195	0.7187
0.0295	1.0469	0.0531	0.0530	0.0295	1.0469	0.0531	0.0530	1.0294	1.7189	0.8197	0.7189
0.0300	1.0477	0.0540	0.0539	0.0300	1.0477	0.0540	0.0539	1.0299	1.7191	0.8199	0.7191
0.0305	1.0485	0.0549	0.0548	0.0305	1.0485	0.0549	0.0548	1.0304	1.7193	0.8201	0.7193
0.0310	1.0493	0.0558	0.0557	0.0310	1.0493	0.0558	0.0557	1.0309	1.7195	0.8203	0.7195
0.0315	1.0501	0.0567	0.0566	0.0315	1.0501	0.0567	0.0566	1.0314	1.7197	0.8205	0.7197
0.0320	1.0509	0.0576	0.0575	0.0320	1.0509	0.0576	0.0575	1.0319	1.7199	0.8207	0.7199
0.0325	1.0517	0.0585	0.0584	0.0325	1.0517	0.0585	0.0584	1.0324	1.7201	0.8209	0.7201
0.0330	1.0525	0.0594	0.0593	0.0330	1.0525	0.0594	0.0593	1.0329	1.7203	0.8211	0.7203
0.0335	1.0533	0.0603	0.0602	0.0335	1.0533	0.0603	0.0602	1.0334	1.7205	0.8213	0.7205
0.0340	1.0541	0.0612	0.0611	0.0340	1.0541	0.0612	0.0611	1.0339	1.7207	0.8215	0.7207
0.0345	1.0549	0.0621	0.0620	0.0345	1.0549	0.0621	0.0620	1.0344	1.7209	0.8217	0.7209
0.0350	1.0557	0.0630	0.0629	0.0350	1.0557	0.0630	0.0629	1.0349	1.7211	0.8219	0.7211
0.0355	1.0565	0.0639	0.0638	0.0355	1.0565	0.0639	0.0638	1.0354	1.7213	0.8221	0.7213
0.0360	1.0573	0.0648	0.0647	0.0360	1.0573	0.0648	0.0647	1.0359	1.7215	0.8223	0.7215
0.0365	1.0581	0.0657	0.0656	0.0365	1.0581	0.0657	0.0656	1.0364	1.7217	0.8225	0.7217
0.0370	1.0589	0.0666	0.0665	0.0370	1.0589	0.0666	0.0665	1.0369	1.7219	0.8227	0.7219
0.0375	1.0597	0.0675	0.0674	0.0375	1.0597	0.0675	0.0674	1.0374	1.7221	0.8229	0.7221
0.0380	1.0605	0.0684	0.0683	0.0380	1.0605	0.0684	0.0683	1.0379	1.7223	0.8231	0.7223
0.0385	1.0613	0.0693	0.0692	0.0385	1.0613	0.0693	0.0692	1.0384	1.7225	0.8233	0.7225
0.0390	1.0621	0.0702	0.0701	0.0390	1.0621	0.0702	0.0701	1.0389	1.7227	0.8235	0.7227
0.0395	1.0629	0.0711	0.0710	0.0395	1.0629	0.0711	0.0710	1.0394	1.7229	0.8237	0.7229
0.0400	1.0637	0.0720	0.0719	0.0400	1.0637	0.0720	0.0719	1.0399	1.7231	0.8239	0.7231
0.0405	1.0645	0.0729	0.0728	0.0405	1.0645	0.0729	0.0728	1.0404	1.7233	0.8241	0.7233
0.0410	1.0653	0.0738	0.0737	0.0410	1.0653	0.0738	0.0737	1.0409	1.7235	0.8243	0.7235
0.0415	1.0661	0.0747	0.0746	0.0415	1.0661	0.0747	0.0746	1.0414	1.7237	0.8245	0.7237
0.0420	1.0669	0.0756	0.0755	0.0420	1.0669	0.0756	0.0755	1.0419	1.7239	0.8247	0.7239
0.0425	1.0677	0.0765	0.0764	0.0425	1.0677	0.0765	0.0764	1.0424	1.7241	0.8249	0.7241
0.0430	1.0685	0.0774	0.0773	0.0430	1.0685	0.0774	0.0773	1.0429	1.7243	0.8251	0.7243
0.0435	1.0693	0.0783	0.0782	0.0435	1.0693	0.0783	0.0782	1.0434	1.7245	0.8253	0.7245
0.0440	1.0701	0.0792	0.0791								

$\alpha = 5/13$

x	F _{5/13} (x)	H _{8/13} (x)	T _{5/13} (x)	x	F _{5/13} (x)	H _{8/13} (x)	T _{5/13} (x)	x	F _{5/13} (x)	H _{8/13} (x)	T _{5/13} (x)	x	F _{5/13} (x)	H _{8/13} (x)	T _{5/13} (x)
1.0	2.7392	1.5927	0.5847	2.0	4.6828	2.8919	0.6723	6.0	29.02997	18.74572	0.63001	10.0	171.6045881	108.1138101	0.63002
1.1	2.8713	1.6909	0.5908	2.1	5.1960	3.1780	0.6752	6.1	32.02147	20.11014	0.63001	10.1	188.1138101	119.1138101	0.63002
1.2	3.0034	1.7891	0.5969	2.2	5.7131	3.4641	0.6781	6.2	35.01296	21.47446	0.63001	10.2	204.6276202	130.1138101	0.63002
1.3	3.1355	1.8873	0.6030	2.3	6.2302	3.7502	0.6810	6.3	38.00445	22.83888	0.63001	10.3	221.1414303	141.1138101	0.63002
1.4	3.2676	1.9855	0.6091	2.4	6.7473	4.0363	0.6839	6.4	41.00000	24.20330	0.63001	10.4	237.6552404	152.1138101	0.63002
1.5	3.3997	2.0837	0.6152	2.5	7.2644	4.3224	0.6868	6.5	44.00000	25.56772	0.63001	10.5	254.1690505	163.1138101	0.63002
1.6	3.5318	2.1819	0.6213	2.6	7.7815	4.6085	0.6897	6.6	47.00000	26.93214	0.63001	10.6	270.6828606	174.1138101	0.63002
1.7	3.6639	2.2801	0.6274	2.7	8.2986	4.8946	0.6926	6.7	50.00000	28.29656	0.63001	10.7	287.1966707	185.1138101	0.63002
1.8	3.7960	2.3783	0.6335	2.8	8.8157	5.1807	0.6955	6.8	53.00000	29.66098	0.63001	10.8	303.7104808	196.1138101	0.63002
1.9	3.9281	2.4765	0.6396	2.9	9.3328	5.4668	0.6984	6.9	56.00000	31.02540	0.63001	10.9	320.2242909	207.1138101	0.63002
2.0	4.0602	2.5747	0.6457	3.0	9.8499	5.7529	0.7013	7.0	59.00000	32.38982	0.63001	11.0	336.7381010	218.1138101	0.63002
2.1	4.1923	2.6729	0.6518	3.1	10.3670	6.0390	0.7042	7.1	62.00000	33.75424	0.63001	11.1	353.2519111	229.1138101	0.63002
2.2	4.3244	2.7711	0.6579	3.2	10.8841	6.3251	0.7071	7.2	65.00000	35.11866	0.63001	11.2	369.7657212	240.1138101	0.63002
2.3	4.4565	2.8693	0.6640	3.3	11.4012	6.6112	0.7100	7.3	68.00000	36.48308	0.63001	11.3	386.2795313	251.1138101	0.63002
2.4	4.5886	2.9675	0.6701	3.4	11.9183	6.8973	0.7129	7.4	71.00000	37.84750	0.63001	11.4	402.7933414	262.1138101	0.63002
2.5	4.7207	3.0657	0.6762	3.5	12.4354	7.1834	0.7158	7.5	74.00000	39.21192	0.63001	11.5	419.3071515	273.1138101	0.63002
2.6	4.8528	3.1639	0.6823	3.6	12.9525	7.4695	0.7187	7.6	77.00000	40.57634	0.63001	11.6	435.8209616	284.1138101	0.63002
2.7	4.9849	3.2621	0.6884	3.7	13.4696	7.7556	0.7216	7.7	80.00000	41.94076	0.63001	11.7	452.3347717	295.1138101	0.63002
2.8	5.1170	3.3603	0.6945	3.8	13.9867	8.0417	0.7245	7.8	83.00000	43.30518	0.63001	11.8	468.8485818	306.1138101	0.63002
2.9	5.2491	3.4585	0.7006	3.9	14.5038	8.3278	0.7274	7.9	86.00000	44.66960	0.63001	11.9	485.3623919	317.1138101	0.63002
3.0	5.3812	3.5567	0.7067	4.0	15.0209	8.6139	0.7303	8.0	89.00000	46.03402	0.63001	12.0	501.8762020	328.1138101	0.63002
3.1	5.5133	3.6549	0.7128	4.1	15.5380	8.9000	0.7332	8.1	92.00000	47.39844	0.63001	12.1	518.3899921	339.1138101	0.63002
3.2	5.6454	3.7531	0.7189	4.2	16.0551	9.1861	0.7361	8.2	95.00000	48.76286	0.63001	12.2	534.9037822	350.1138101	0.63002
3.3	5.7775	3.8513	0.7250	4.3	16.5722	9.4722	0.7390	8.3	98.00000	50.12728	0.63001	12.3	551.4175723	361.1138101	0.63002
3.4	5.9096	3.9495	0.7311	4.4	17.0893	9.7583	0.7419	8.4	101.00000	51.49170	0.63001	12.4	567.9313624	372.1138101	0.63002
3.5	6.0417	4.0477	0.7372	4.5	17.6064	10.0444	0.7448	8.5	104.00000	52.85612	0.63001	12.5	584.4451525	383.1138101	0.63002
3.6	6.1738	4.1459	0.7433	4.6	18.1235	10.3305	0.7477	8.6	107.00000	54.22054	0.63001	12.6	600.9589426	394.1138101	0.63002
3.7	6.3059	4.2441	0.7494	4.7	18.6406	10.6166	0.7506	8.7	110.00000	55.58496	0.63001	12.7	617.4727327	405.1138101	0.63002
3.8	6.4380	4.3423	0.7555	4.8	19.1577	10.9027	0.7535	8.8	113.00000	56.94938	0.63001	12.8	633.9865228	416.1138101	0.63002
3.9	6.5701	4.4405	0.7616	4.9	19.6748	11.1888	0.7564	8.9	116.00000	58.31380	0.63001	12.9	650.5003129	427.1138101	0.63002
4.0	6.7022	4.5387	0.7677	5.0	20.1919	11.4749	0.7593	9.0	119.00000	59.67822	0.63001	13.0	667.0141030	438.1138101	0.63002
4.1	6.8343	4.6369	0.7738	5.1	20.7090	11.7610	0.7622	9.1	122.00000	61.04264	0.63001	13.1	683.5278931	449.1138101	0.63002
4.2	6.9664	4.7351	0.7799	5.2	21.2261	12.0471	0.7651	9.2	125.00000	62.40706	0.63001	13.2	700.0416832	460.1138101	0.63002
4.3	7.0985	4.8333	0.7860	5.3	21.7432	12.3332	0.7680	9.3	128.00000	63.77148	0.63001	13.3	716.5554733	471.1138101	0.63002
4.4	7.2306	4.9315	0.7921	5.4	22.2603	12.6193	0.7709	9.4	131.00000	65.13590	0.63001	13.4	733.0692634	482.1138101	0.63002
4.5	7.3627	5.0297	0.7982	5.5	22.7774	12.9054	0.7738	9.5	134.00000	66.50032	0.63001	13.5	749.5830535	493.1138101	0.63002
4.6	7.4948	5.1279	0.8043	5.6	23.2945	13.1915	0.7767	9.6	137.00000	67.86474	0.63001	13.6	766.0968436	504.1138101	0.63002
4.7	7.6269	5.2261	0.8104	5.7	23.8116	13.4776	0.7796	9.7	140.00000	69.22916	0.63001	13.7	782.6106337	515.1138101	0.63002
4.8	7.7590	5.3243	0.8165	5.8	24.3287	13.7637	0.7825	9.8	143.00000	70.59358	0.63001	13.8	799.1244238	526.1138101	0.63002
4.9	7.8911	5.4225	0.8226	5.9	24.8458	14.0498	0.7854	9.9	146.00000	71.95800	0.63001	13.9	815.6382139	537.1138101	0.63002
5.0	8.0232	5.5207	0.8287	6.0	25.3629	14.3359	0.7883	10.0	149.00000	73.32242	0.63001	14.0	832.1520040	548.1138101	0.63002

TABLE 20B. Lanchester-Clifford-Schlafli Functions $F_\alpha(x)$, $H_{1-\alpha}(x)$, and $T_\alpha(x)$ for $\alpha = 5/13$ and x from 1.50 to 10.0.

$\alpha = 8/13$

x	$F_{8/13}(x)$	$H_{5/13}(x)$	$T_{8/13}(x)$	x	$F_{8/13}(x)$	$H_{5/13}(x)$	$T_{8/13}(x)$	x	$F_{8/13}(x)$	$H_{5/13}(x)$	$T_{8/13}(x)$
1.5000	3.0000	3.0000	1.5000	6.0000	3.0000	3.0000	1.5000	10.0000	3.0000	3.0000	1.5000
1.5005	3.0010	3.0010	1.5005	6.0005	3.0010	3.0010	1.5005	10.0005	3.0010	3.0010	1.5005
1.5010	3.0020	3.0020	1.5010	6.0010	3.0020	3.0020	1.5010	10.0010	3.0020	3.0020	1.5010
1.5015	3.0030	3.0030	1.5015	6.0015	3.0030	3.0030	1.5015	10.0015	3.0030	3.0030	1.5015
1.5020	3.0040	3.0040	1.5020	6.0020	3.0040	3.0040	1.5020	10.0020	3.0040	3.0040	1.5020
1.5025	3.0050	3.0050	1.5025	6.0025	3.0050	3.0050	1.5025	10.0025	3.0050	3.0050	1.5025
1.5030	3.0060	3.0060	1.5030	6.0030	3.0060	3.0060	1.5030	10.0030	3.0060	3.0060	1.5030
1.5035	3.0070	3.0070	1.5035	6.0035	3.0070	3.0070	1.5035	10.0035	3.0070	3.0070	1.5035
1.5040	3.0080	3.0080	1.5040	6.0040	3.0080	3.0080	1.5040	10.0040	3.0080	3.0080	1.5040
1.5045	3.0090	3.0090	1.5045	6.0045	3.0090	3.0090	1.5045	10.0045	3.0090	3.0090	1.5045
1.5050	3.0100	3.0100	1.5050	6.0050	3.0100	3.0100	1.5050	10.0050	3.0100	3.0100	1.5050
1.5055	3.0110	3.0110	1.5055	6.0055	3.0110	3.0110	1.5055	10.0055	3.0110	3.0110	1.5055
1.5060	3.0120	3.0120	1.5060	6.0060	3.0120	3.0120	1.5060	10.0060	3.0120	3.0120	1.5060
1.5065	3.0130	3.0130	1.5065	6.0065	3.0130	3.0130	1.5065	10.0065	3.0130	3.0130	1.5065
1.5070	3.0140	3.0140	1.5070	6.0070	3.0140	3.0140	1.5070	10.0070	3.0140	3.0140	1.5070
1.5075	3.0150	3.0150	1.5075	6.0075	3.0150	3.0150	1.5075	10.0075	3.0150	3.0150	1.5075
1.5080	3.0160	3.0160	1.5080	6.0080	3.0160	3.0160	1.5080	10.0080	3.0160	3.0160	1.5080
1.5085	3.0170	3.0170	1.5085	6.0085	3.0170	3.0170	1.5085	10.0085	3.0170	3.0170	1.5085
1.5090	3.0180	3.0180	1.5090	6.0090	3.0180	3.0180	1.5090	10.0090	3.0180	3.0180	1.5090
1.5095	3.0190	3.0190	1.5095	6.0095	3.0190	3.0190	1.5095	10.0095	3.0190	3.0190	1.5095
1.5100	3.0200	3.0200	1.5100	6.0100	3.0200	3.0200	1.5100	10.0100	3.0200	3.0200	1.5100
1.5105	3.0210	3.0210	1.5105	6.0105	3.0210	3.0210	1.5105	10.0105	3.0210	3.0210	1.5105
1.5110	3.0220	3.0220	1.5110	6.0110	3.0220	3.0220	1.5110	10.0110	3.0220	3.0220	1.5110
1.5115	3.0230	3.0230	1.5115	6.0115	3.0230	3.0230	1.5115	10.0115	3.0230	3.0230	1.5115
1.5120	3.0240	3.0240	1.5120	6.0120	3.0240	3.0240	1.5120	10.0120	3.0240	3.0240	1.5120
1.5125	3.0250	3.0250	1.5125	6.0125	3.0250	3.0250	1.5125	10.0125	3.0250	3.0250	1.5125
1.5130	3.0260	3.0260	1.5130	6.0130	3.0260	3.0260	1.5130	10.0130	3.0260	3.0260	1.5130
1.5135	3.0270	3.0270	1.5135	6.0135	3.0270	3.0270	1.5135	10.0135	3.0270	3.0270	1.5135
1.5140	3.0280	3.0280	1.5140	6.0140	3.0280	3.0280	1.5140	10.0140	3.0280	3.0280	1.5140
1.5145	3.0290	3.0290	1.5145	6.0145	3.0290	3.0290	1.5145	10.0145	3.0290	3.0290	1.5145
1.5150	3.0300	3.0300	1.5150	6.0150	3.0300	3.0300	1.5150	10.0150	3.0300	3.0300	1.5150
1.5155	3.0310	3.0310	1.5155	6.0155	3.0310	3.0310	1.5155	10.0155	3.0310	3.0310	1.5155
1.5160	3.0320	3.0320	1.5160	6.0160	3.0320	3.0320	1.5160	10.0160	3.0320	3.0320	1.5160
1.5165	3.0330	3.0330	1.5165	6.0165	3.0330	3.0330	1.5165	10.0165	3.0330	3.0330	1.5165
1.5170	3.0340	3.0340	1.5170	6.0170	3.0340	3.0340	1.5170	10.0170	3.0340	3.0340	1.5170
1.5175	3.0350	3.0350	1.5175	6.0175	3.0350	3.0350	1.5175	10.0175	3.0350	3.0350	1.5175
1.5180	3.0360	3.0360	1.5180	6.0180	3.0360	3.0360	1.5180	10.0180	3.0360	3.0360	1.5180
1.5185	3.0370	3.0370	1.5185	6.0185	3.0370	3.0370	1.5185	10.0185	3.0370	3.0370	1.5185
1.5190	3.0380	3.0380	1.5190	6.0190	3.0380	3.0380	1.5190	10.0190	3.0380	3.0380	1.5190
1.5195	3.0390	3.0390	1.5195	6.0195	3.0390	3.0390	1.5195	10.0195	3.0390	3.0390	1.5195
1.5200	3.0400	3.0400	1.5200	6.0200	3.0400	3.0400	1.5200	10.0200	3.0400	3.0400	1.5200

TABLE 21B. Lanchester-Clifford-Schläfli Functions $F_{\alpha}(x)$, $H_{1-\alpha}(x)$, and

$T_{\alpha}(x)$ for $\alpha = 8/13$ and x from 1.50 to 10.0.

$\alpha = 5/17$

x	$F_{5/17}(x)$	$H_{12/17}(x)$	$T_{5/17}(x)$	x	$F_{5/17}(x)$	$H_{12/17}(x)$	$T_{5/17}(x)$	x	$F_{5/17}(x)$	$H_{12/17}(x)$	$T_{5/17}(x)$
0.0000	0.0000	0.0000	0.0000	0.0000	1.1768	0.2757	0.1768	1.00	1.9517	0.1418	0.3173
0.0001	0.0001	0.0001	0.0001	0.0001	1.2559	0.2800	0.1770	0.0102	1.9764	0.1433	0.3173
0.0002	0.0002	0.0002	0.0002	0.0002	1.3351	0.2843	0.1772	0.0204	1.9978	0.1448	0.3173
0.0003	0.0003	0.0003	0.0003	0.0003	1.4144	0.2886	0.1774	0.0306	2.0192	0.1463	0.3173
0.0004	0.0004	0.0004	0.0004	0.0004	1.4937	0.2929	0.1776	0.0408	2.0406	0.1478	0.3173
0.0005	0.0005	0.0005	0.0005	0.0005	1.5730	0.2972	0.1778	0.0510	2.0620	0.1493	0.3173
0.0006	0.0006	0.0006	0.0006	0.0006	1.6523	0.3015	0.1780	0.0612	2.0834	0.1508	0.3173
0.0007	0.0007	0.0007	0.0007	0.0007	1.7316	0.3058	0.1782	0.0714	2.1048	0.1523	0.3173
0.0008	0.0008	0.0008	0.0008	0.0008	1.8109	0.3101	0.1784	0.0816	2.1262	0.1538	0.3173
0.0009	0.0009	0.0009	0.0009	0.0009	1.8902	0.3144	0.1786	0.0918	2.1476	0.1553	0.3173
0.0010	0.0010	0.0010	0.0010	0.0010	1.9695	0.3187	0.1788	0.1020	2.1690	0.1568	0.3173
0.0011	0.0011	0.0011	0.0011	0.0011	2.0488	0.3230	0.1790	0.1122	2.1904	0.1583	0.3173
0.0012	0.0012	0.0012	0.0012	0.0012	2.1281	0.3273	0.1792	0.1224	2.2118	0.1598	0.3173
0.0013	0.0013	0.0013	0.0013	0.0013	2.2074	0.3316	0.1794	0.1326	2.2332	0.1613	0.3173
0.0014	0.0014	0.0014	0.0014	0.0014	2.2867	0.3359	0.1796	0.1428	2.2546	0.1628	0.3173
0.0015	0.0015	0.0015	0.0015	0.0015	2.3660	0.3402	0.1798	0.1530	2.2760	0.1643	0.3173
0.0016	0.0016	0.0016	0.0016	0.0016	2.4453	0.3445	0.1800	0.1632	2.2974	0.1658	0.3173
0.0017	0.0017	0.0017	0.0017	0.0017	2.5246	0.3488	0.1802	0.1734	2.3188	0.1673	0.3173
0.0018	0.0018	0.0018	0.0018	0.0018	2.6039	0.3531	0.1804	0.1836	2.3402	0.1688	0.3173
0.0019	0.0019	0.0019	0.0019	0.0019	2.6832	0.3574	0.1806	0.1938	2.3616	0.1703	0.3173
0.0020	0.0020	0.0020	0.0020	0.0020	2.7625	0.3617	0.1808	0.2040	2.3830	0.1718	0.3173
0.0021	0.0021	0.0021	0.0021	0.0021	2.8418	0.3660	0.1810	0.2142	2.4044	0.1733	0.3173
0.0022	0.0022	0.0022	0.0022	0.0022	2.9211	0.3703	0.1812	0.2244	2.4258	0.1748	0.3173
0.0023	0.0023	0.0023	0.0023	0.0023	3.0004	0.3746	0.1814	0.2346	2.4472	0.1763	0.3173
0.0024	0.0024	0.0024	0.0024	0.0024	3.0797	0.3789	0.1816	0.2448	2.4686	0.1778	0.3173
0.0025	0.0025	0.0025	0.0025	0.0025	3.1590	0.3832	0.1818	0.2550	2.4900	0.1793	0.3173
0.0026	0.0026	0.0026	0.0026	0.0026	3.2383	0.3875	0.1820	0.2652	2.5114	0.1808	0.3173
0.0027	0.0027	0.0027	0.0027	0.0027	3.3176	0.3918	0.1822	0.2754	2.5328	0.1823	0.3173
0.0028	0.0028	0.0028	0.0028	0.0028	3.3969	0.3961	0.1824	0.2856	2.5542	0.1838	0.3173
0.0029	0.0029	0.0029	0.0029	0.0029	3.4762	0.4004	0.1826	0.2958	2.5756	0.1853	0.3173
0.0030	0.0030	0.0030	0.0030	0.0030	3.5555	0.4047	0.1828	0.3060	2.5970	0.1868	0.3173
0.0031	0.0031	0.0031	0.0031	0.0031	3.6348	0.4090	0.1830	0.3162	2.6184	0.1883	0.3173
0.0032	0.0032	0.0032	0.0032	0.0032	3.7141	0.4133	0.1832	0.3264	2.6398	0.1898	0.3173
0.0033	0.0033	0.0033	0.0033	0.0033	3.7934	0.4176	0.1834	0.3366	2.6612	0.1913	0.3173
0.0034	0.0034	0.0034	0.0034	0.0034	3.8727	0.4219	0.1836	0.3468	2.6826	0.1928	0.3173
0.0035	0.0035	0.0035	0.0035	0.0035	3.9520	0.4262	0.1838	0.3570	2.7040	0.1943	0.3173
0.0036	0.0036	0.0036	0.0036	0.0036	4.0313	0.4305	0.1840	0.3672	2.7254	0.1958	0.3173
0.0037	0.0037	0.0037	0.0037	0.0037	4.1106	0.4348	0.1842	0.3774	2.7468	0.1973	0.3173
0.0038	0.0038	0.0038	0.0038	0.0038	4.1899	0.4391	0.1844	0.3876	2.7682	0.1988	0.3173
0.0039	0.0039	0.0039	0.0039	0.0039	4.2692	0.4434	0.1846	0.3978	2.7896	0.2003	0.3173
0.0040	0.0040	0.0040	0.0040	0.0040	4.3485	0.4477	0.1848	0.4080	2.8110	0.2018	0.3173
0.0041	0.0041	0.0041	0.0041	0.0041	4.4278	0.4520	0.1850	0.4182	2.8324	0.2033	0.3173
0.0042	0.0042	0.0042	0.0042	0.0042	4.5071	0.4563	0.1852	0.4284	2.8538	0.2048	0.3173
0.0043	0.0043	0.0043	0.0043	0.0043	4.5864	0.4606	0.1854	0.4386	2.8752	0.2063	0.3173
0.0044	0.0044	0.0044	0.0044	0.0044	4.6657	0.4649	0.1856	0.4488	2.8966	0.2078	0.3173
0.0045	0.0045	0.0045	0.0045	0.0045	4.7450	0.4692	0.1858	0.4590	2.9180	0.2093	0.3173
0.0046	0.0046	0.0046	0.0046	0.0046	4.8243	0.4735	0.1860	0.4692	2.9394	0.2108	0.3173
0.0047	0.0047	0.0047	0.0047	0.0047	4.9036	0.4778	0.1862	0.4794	2.9608	0.2123	0.3173
0.0048	0.0048	0.0048	0.0048	0.0048	4.9829	0.4821	0.1864	0.4896	2.9822	0.2138	0.3173
0.0049	0.0049	0.0049	0.0049	0.0049	5.0622	0.4864	0.1866	0.4998	3.0036	0.2153	0.3173
0.0050	0.0050	0.0050	0.0050	0.0050	5.1415	0.4907	0.1868	0.5100	3.0250	0.2168	0.3173

TABLE 22A. Lanchester-Clifford-Schlafli Functions $F_{\alpha}(x)$, $H_{1-\alpha}(x)$, and

$T_{\alpha}(x)$ for $\alpha = 5/17$ and x from 0.00 to 1.50.

$\alpha = 5/17$

x	$F_{5/17}(x)$	$H_{12/17}(x)$	$T_{5/17}(x)$	x	$F_{5/17}(x)$	$H_{12/17}(x)$	$T_{5/17}(x)$	x	$F_{5/17}(x)$	$H_{12/17}(x)$	$T_{5/17}(x)$
0.0000	3.36340	1.8905	0.38324	0.0000	5.91999	3.41144	0.40789	6.0000	4.2602996	1.795802	0.42194
0.0005	3.34078	1.89389	0.38401	0.0005	5.90890	3.41177	0.40790	6.0005	4.2463050	1.795900	0.42194
0.0010	3.31827	1.89733	0.38478	0.0010	5.89781	3.41210	0.40791	6.0010	4.2323104	1.796000	0.42194
0.0015	3.29576	1.90077	0.38555	0.0015	5.88672	3.41243	0.40792	6.0015	4.2183158	1.796100	0.42194
0.0020	3.27325	1.90421	0.38632	0.0020	5.87563	3.41276	0.40793	6.0020	4.2043212	1.796200	0.42194
0.0025	3.25074	1.90765	0.38709	0.0025	5.86454	3.41309	0.40794	6.0025	4.1903266	1.796300	0.42194
0.0030	3.22823	1.91109	0.38786	0.0030	5.85345	3.41342	0.40795	6.0030	4.1763320	1.796400	0.42194
0.0035	3.20572	1.91453	0.38863	0.0035	5.84236	3.41375	0.40796	6.0035	4.1623374	1.796500	0.42194
0.0040	3.18321	1.91797	0.38940	0.0040	5.83127	3.41408	0.40797	6.0040	4.1483428	1.796600	0.42194
0.0045	3.16070	1.92141	0.39017	0.0045	5.82018	3.41441	0.40798	6.0045	4.1343482	1.796700	0.42194
0.0050	3.13819	1.92485	0.39094	0.0050	5.80909	3.41474	0.40799	6.0050	4.1203536	1.796800	0.42194
0.0055	3.11568	1.92829	0.39171	0.0055	5.79800	3.41507	0.40800	6.0055	4.1063590	1.796900	0.42194
0.0060	3.09317	1.93173	0.39248	0.0060	5.78691	3.41540	0.40801	6.0060	4.0923644	1.797000	0.42194
0.0065	3.07066	1.93517	0.39325	0.0065	5.77582	3.41573	0.40802	6.0065	4.0783698	1.797100	0.42194
0.0070	3.04815	1.93861	0.39402	0.0070	5.76473	3.41606	0.40803	6.0070	4.0643752	1.797200	0.42194
0.0075	3.02564	1.94205	0.39479	0.0075	5.75364	3.41639	0.40804	6.0075	4.0503806	1.797300	0.42194
0.0080	3.00313	1.94549	0.39556	0.0080	5.74255	3.41672	0.40805	6.0080	4.0363860	1.797400	0.42194
0.0085	2.98062	1.94893	0.39633	0.0085	5.73146	3.41705	0.40806	6.0085	4.0223914	1.797500	0.42194
0.0090	2.95811	1.95237	0.39710	0.0090	5.72037	3.41738	0.40807	6.0090	4.0083968	1.797600	0.42194
0.0095	2.93560	1.95581	0.39787	0.0095	5.70928	3.41771	0.40808	6.0095	4.0044022	1.797700	0.42194
0.0100	2.91309	1.95925	0.39864	0.0100	5.69819	3.41804	0.40809	6.0100	4.0004076	1.797800	0.42194
0.0105	2.89058	1.96269	0.39941	0.0105	5.68710	3.41837	0.40810	6.0105	3.9964130	1.797900	0.42194
0.0110	2.86807	1.96613	0.40018	0.0110	5.67601	3.41870	0.40811	6.0110	3.9924184	1.798000	0.42194
0.0115	2.84556	1.96957	0.40095	0.0115	5.66492	3.41903	0.40812	6.0115	3.9884238	1.798100	0.42194
0.0120	2.82305	1.97301	0.40172	0.0120	5.65383	3.41936	0.40813	6.0120	3.9844292	1.798200	0.42194
0.0125	2.80054	1.97645	0.40249	0.0125	5.64274	3.41969	0.40814	6.0125	3.9804346	1.798300	0.42194
0.0130	2.77803	1.97989	0.40326	0.0130	5.63165	3.42002	0.40815	6.0130	3.9764400	1.798400	0.42194
0.0135	2.75552	1.98333	0.40403	0.0135	5.62056	3.42035	0.40816	6.0135	3.9724454	1.798500	0.42194
0.0140	2.73301	1.98677	0.40480	0.0140	5.60947	3.42068	0.40817	6.0140	3.9684508	1.798600	0.42194
0.0145	2.71050	1.99021	0.40557	0.0145	5.59838	3.42101	0.40818	6.0145	3.9644562	1.798700	0.42194
0.0150	2.68799	1.99365	0.40634	0.0150	5.58729	3.42134	0.40819	6.0150	3.9604616	1.798800	0.42194
0.0155	2.66548	1.99709	0.40711	0.0155	5.57620	3.42167	0.40820	6.0155	3.9564670	1.798900	0.42194
0.0160	2.64297	2.00053	0.40788	0.0160	5.56511	3.42200	0.40821	6.0160	3.9524724	1.799000	0.42194
0.0165	2.62046	2.00397	0.40865	0.0165	5.55402	3.42233	0.40822	6.0165	3.9484778	1.799100	0.42194
0.0170	2.59795	2.00741	0.40942	0.0170	5.54293	3.42266	0.40823	6.0170	3.9444832	1.799200	0.42194
0.0175	2.57544	2.01085	0.41019	0.0175	5.53184	3.42299	0.40824	6.0175	3.9404886	1.799300	0.42194
0.0180	2.55293	2.01429	0.41096	0.0180	5.52075	3.42332	0.40825	6.0180	3.9364940	1.799400	0.42194
0.0185	2.53042	2.01773	0.41173	0.0185	5.50966	3.42365	0.40826	6.0185	3.9324994	1.799500	0.42194
0.0190	2.50791	2.02117	0.41250	0.0190	5.49857	3.42398	0.40827	6.0190	3.9285048	1.799600	0.42194
0.0195	2.48540	2.02461	0.41327	0.0195	5.48748	3.42431	0.40828	6.0195	3.9245102	1.799700	0.42194
0.0200	2.46289	2.02805	0.41404	0.0200	5.47639	3.42464	0.40829	6.0200	3.9205156	1.799800	0.42194
0.0205	2.44038	2.03149	0.41481	0.0205	5.46530	3.42497	0.40830	6.0205	3.9165210	1.799900	0.42194
0.0210	2.41787	2.03493	0.41558	0.0210	5.45421	3.42530	0.40831	6.0210	3.9125264	1.800000	0.42194
0.0215	2.39536	2.03837	0.41635	0.0215	5.44312	3.42563	0.40832	6.0215	3.9085318	1.800100	0.42194
0.0220	2.37285	2.04181	0.41712	0.0220	5.43203	3.42596	0.40833	6.0220	3.9045372	1.800200	0.42194
0.0225	2.35034	2.04525	0.41789	0.0225	5.42094	3.42629	0.40834	6.0225	3.9005426	1.800300	0.42194
0.0230	2.32783	2.04869	0.41866	0.0230	5.40985	3.42662	0.40835	6.0230	3.8965480	1.800400	0.42194
0.0235	2.30532	2.05213	0.41943	0.0235	5.39876	3.42695	0.40836	6.0235	3.8925534	1.800500	0.42194
0.0240	2.28281	2.05557	0.42020	0.0240	5.38767	3.42728	0.40837	6.0240	3.8885588	1.800600	0.42194
0.0245	2.26030	2.05901	0.42097	0.0245	5.37658	3.42761	0.40838	6.0245	3.8845642	1.800700	0.42194
0.0250	2.23779	2.06245	0.42174	0.0250	5.36549	3.42794	0.40839	6.0250	3.8805696	1.800800	0.42194
0.0255	2.21528	2.06589	0.42251	0.0255	5.35440	3.42827	0.40840	6.0255	3.8765750	1.800900	0.42194
0.0260	2.19277	2.06933	0.42328	0.0260	5.34331	3.42860	0.40841	6.0260	3.8725804	1.801000	0.42194
0.0265	2.17026	2.07277	0.42405	0.0265	5.33222	3.42893	0.40842	6.0265	3.8685858	1.801100	0.42194
0.0270	2.14775	2.07621	0.42482	0.0270	5.32113	3.42926	0.40843	6.0270	3.8645912	1.801200	0.42194
0.0275	2.12524	2.07965	0.42559	0.0275	5.31004	3.42959	0.40844	6.0275	3.8605966	1.801300	0.42194
0.0280	2.10273	2.08309	0.42636	0.0280	5.29895	3.42992	0.40845	6.0280	3.8566020	1.801400	0.42194
0.0285	2.08022	2.08653	0.42713	0.0285	5.28786	3.43025	0.40846	6.0285	3.8526074	1.801500	0.42194
0.0290	2.05771	2.08997	0.42790	0.0290	5.27677	3.43058	0.40847	6.0290	3.8486128	1.801600	0.42194
0.0295	2.03520	2.09341	0.42867	0.0295	5.26568	3.43091	0.40848	6.0295	3.8446182	1.801700	0.42194
0.0300	2.01269	2.09685	0.42944	0.0300	5.25459	3.43124	0.40849	6.0300	3.8406236	1.801800	0.42194
0.0305	1.99018	2.10029	0.43021	0.0305	5.24350	3.43157	0.40850	6.0305	3.8366290	1.801900	0.42194
0.0310	1.96767	2.10373	0.43098	0.0310	5.23241	3.43190	0.40851	6.0310	3.8326344	1.802000	0.42194
0.0315	1.94516	2.10717	0.43175	0.0315	5.22132	3.43223	0.40852	6.0315	3.8286398	1.802100	0.42194
0.0320	1.92265	2.11061	0.43252	0.0320	5.21023	3.43256	0.40853	6.0320	3.8246452	1.802200	0.42194
0.0325	1.90014	2.11405	0.43329	0.0325	5.19914	3.43289	0.40854	6.0325	3.8206506	1.802300	0.42194
0.0330	1.87763	2.11749	0.43406	0.0330	5.18805	3.43322	0.40855	6.0330	3.8166560	1.802400	0.42194
0.0335	1.85512	2.12093	0.43483	0.0335	5.17696	3.43355	0.40856	6.0335	3.8126614	1.802500	0.42194
0.0340	1.83261	2.12437	0.43560	0.0340	5.16587	3.43388	0.40857	6.0340	3.8086668	1.802600	0.42194
0.0345	1.81010	2.12781	0.43637	0.0345	5.15478	3.43421	0.40858	6.0345	3.8046722	1.802700	0.42194
0.0350	1.78759	2.13125	0.43714	0.0350	5.14369	3.43454	0.40859	6.0350	3.8006776	1.802800	0.42194
0.0355	1.76508	2.13469	0.43791	0.0355	5.13260	3.43487	0.40860	6.0355	3.7966830	1.802900	0.42194
0.0360	1.74257	2.13813	0.43868	0.0360	5.12151	3.43520	0.40861	6.0360	3.7926884	1.803000	0.42194
0.0365	1.72006	2.14157	0.43945	0.0365	5.11042	3.43553	0.40862	6.0365	3.7886938	1.803100	0.42194
0.0370	1.69755	2.14501	0.44022	0.0370	5.09933	3.43586	0.40863	6.0370	3.7846992	1.803200	0.42194
0.0375	1.67504	2.14845	0.44099	0.0375	5.08824	3.43619	0.40864	6.0375	3.7807046	1.803300	0.42194
0.0380	1.65253	2.15189	0.44176	0.0380	5.07715	3.43652	0.40865	6.0380	3.7767100	1.803400	0.42194
0.0385	1.63002	2.15533	0.44253	0.0385	5.06606	3.43685	0.40866	6.0385	3.7727154	1.803500	0.42194
0.0390	1.60751	2.15877	0.44330	0.0390	5.05497	3.43718	0.40867	6.0390	3.7687208	1.803600	0.42194
0.0395	1.58500	2.16221	0.44407	0.0395	5.04388	3.43751	0.40868	6.0395	3.7647262	1.803700	0.42194
0.0400	1.56249	2.16565	0.44484	0.0400	5.03279	3.43784	0.40869	6.0400	3.7607316	1.803800	0.42194
0.0405	1.54000	2									

$\alpha = 12/17$

x	$F_{12/17}(x)$	$H_{5/17}(x)$	$T_{12/17}(x)$	x	$F_{12/17}(x)$	$H_{5/17}(x)$	$T_{12/17}(x)$	x	$F_{12/17}(x)$	$H_{5/17}(x)$	$T_{12/17}(x)$
0.01	1.00000	0.0	0.0	0.51	1.09018	1.57792	1.47440	1.00	1.38093	2.72883	1.97174
0.02	1.00014	0.1064	0.15063	0.52	1.09389	1.59998	1.47618	1.01	1.38915	2.74466	1.97866
0.03	1.00037	0.2099	0.22443	0.53	1.09768	1.62098	1.47774	1.02	1.39749	2.76092	1.98557
0.04	1.00069	0.3162	0.34059	0.54	1.10155	1.64200	1.47908	1.03	1.40597	2.77717	1.99247
0.05	1.00099	0.3808	0.3808	0.55	1.10553	1.66302	1.48021	1.04	1.41446	2.79342	1.99937
0.06	1.00128	0.4428	0.4193	0.56	1.10953	1.68406	1.48114	1.05	1.42310	2.80967	2.00626
0.07	1.00174	0.5029	0.47893	0.57	1.11364	1.70512	1.48186	1.06	1.43186	2.82592	2.01315
0.08	1.00227	0.5613	0.53488	0.58	1.11781	1.72620	1.48238	1.07	1.44073	2.84217	2.02004
0.09	1.00287	0.6181	0.58718	0.59	1.12211	1.74730	1.48270	1.08	1.44970	2.85842	2.02693
0.10	1.00354	0.6734	0.63683	0.60	1.12646	1.76841	1.48282	1.09	1.45878	2.87467	2.03382
0.11	1.00429	0.7272	0.68393	0.61	1.13092	1.78952	1.48274	1.10	1.46797	2.89092	2.04071
0.12	1.00511	0.7795	0.72848	0.62	1.13547	1.81063	1.48246	1.11	1.47726	2.90717	2.04760
0.13	1.00599	0.8303	0.77058	0.63	1.14011	1.83174	1.48198	1.12	1.48665	2.92342	2.05449
0.14	1.00693	0.8796	0.81023	0.64	1.14484	1.85285	1.48130	1.13	1.49614	2.93967	2.06138
0.15	1.00793	0.9274	0.84753	0.65	1.14964	1.87396	1.48042	1.14	1.50573	2.95592	2.06827
0.16	1.00900	0.9737	0.88263	0.66	1.15451	1.89507	1.47935	1.15	1.51542	2.97217	2.07516
0.17	1.01014	1.0185	0.91563	0.67	1.15944	1.91618	1.47807	1.16	1.52515	2.98842	2.08205
0.18	1.01136	1.0618	0.94663	0.68	1.16442	1.93729	1.47660	1.17	1.53490	2.99467	2.08894
0.19	1.01266	1.1036	0.97573	0.69	1.16944	1.95840	1.47492	1.18	1.54465	3.00092	2.09583
0.20	1.01404	1.1439	1.00303	0.70	1.17451	1.97951	1.47305	1.19	1.55440	3.00717	2.10272
0.21	1.01549	1.1827	1.02853	0.71	1.17962	1.99962	1.47098	1.20	1.56415	3.01342	2.10961
0.22	1.01701	1.2200	1.05223	0.72	1.18477	2.01973	1.46871	1.21	1.57390	3.01967	2.11650
0.23	1.01859	1.2558	1.07423	0.73	1.18994	2.03984	1.46624	1.22	1.58365	3.02592	2.12339
0.24	1.02024	1.2901	1.09453	0.74	1.19511	2.05995	1.46357	1.23	1.59340	3.03217	2.13028
0.25	1.02196	1.3229	1.11323	0.75	1.20028	2.07956	1.46070	1.24	1.60315	3.03842	2.13717
0.26	1.02374	1.3542	1.13043	0.76	1.20545	2.09867	1.45763	1.25	1.61290	3.04467	2.14406
0.27	1.02557	1.3840	1.14613	0.77	1.21062	2.11728	1.45436	1.26	1.62265	3.05092	2.15095
0.28	1.02745	1.4123	1.16033	0.78	1.21579	2.13539	1.45089	1.27	1.63240	3.05717	2.15784
0.29	1.02938	1.4391	1.17303	0.79	1.22096	2.15290	1.44722	1.28	1.64215	3.06342	2.16473
0.30	1.03136	1.4644	1.18433	0.80	1.22613	2.17001	1.44335	1.29	1.65190	3.06967	2.17162
0.31	1.03339	1.4882	1.19423	0.81	1.23130	2.18662	1.43928	1.30	1.66165	3.07592	2.17851
0.32	1.03547	1.5105	1.20273	0.82	1.23647	2.20273	1.43491	1.31	1.67140	3.08217	2.18540
0.33	1.03760	1.5313	1.21003	0.83	1.24164	2.21834	1.43024	1.32	1.68115	3.08842	2.19229
0.34	1.03978	1.5506	1.21613	0.84	1.24681	2.23345	1.42537	1.33	1.69090	3.09467	2.19918
0.35	1.04201	1.5684	1.22103	0.85	1.25198	2.24806	1.42030	1.34	1.70065	3.10092	2.20607
0.36	1.04429	1.5847	1.22473	0.86	1.25715	2.26217	1.41503	1.35	1.71040	3.10717	2.21296
0.37	1.04662	1.5995	1.22723	0.87	1.26232	2.27578	1.40956	1.36	1.72015	3.11342	2.21985
0.38	1.04900	1.6128	1.22853	0.88	1.26749	2.28889	1.40389	1.37	1.72990	3.11967	2.22674
0.39	1.05143	1.6246	1.22873	0.89	1.27266	2.30150	1.39802	1.38	1.73965	3.12592	2.23363
0.40	1.05391	1.6349	1.22783	0.90	1.27783	2.31361	1.39185	1.39	1.74940	3.13217	2.24052
0.41	1.05644	1.6437	1.22583	0.91	1.28299	2.32522	1.38548	1.40	1.75915	3.13842	2.24741
0.42	1.05902	1.6510	1.22273	0.92	1.28816	2.33633	1.37891	1.41	1.76890	3.14467	2.25430
0.43	1.06165	1.6568	1.21853	0.93	1.29333	2.34694	1.37214	1.42	1.77865	3.15092	2.26119
0.44	1.06433	1.6611	1.21323	0.94	1.29850	2.35705	1.36527	1.43	1.78840	3.15717	2.26808
0.45	1.06706	1.6639	1.20683	0.95	1.30367	2.36666	1.35830	1.44	1.79815	3.16342	2.27497
0.46	1.06984	1.6652	1.20033	0.96	1.30884	2.37577	1.35123	1.45	1.80790	3.16967	2.28186
0.47	1.07267	1.6650	1.19273	0.97	1.31399	2.38438	1.34406	1.46	1.81765	3.17592	2.28875
0.48	1.07555	1.6633	1.18403	0.98	1.31916	2.39249	1.33679	1.47	1.82740	3.18217	2.29564
0.49	1.07848	1.6601	1.17423	0.99	1.32433	2.40010	1.32942	1.48	1.83715	3.18842	2.30253
0.50	1.08146	1.6554	1.16343	1.00	1.32950	2.40721	1.32195	1.50	1.84690	3.19467	2.30942

TABLE 23A. Lanchester-Clifford-Schlöfli Functions $F_{\alpha}(x)$, $H_{1-\alpha}(x)$, and $T_{\alpha}(x)$ for $\alpha = 12/17$ and x from 0.00 to 1.50.

$\alpha = 12/17$

x	F _{12/17} (x)	H _{5/17} (x)	T _{12/17} (x)	F _{12/17} (x)	H _{5/17} (x)	T _{12/17} (x)	x	F _{12/17} (x)	H _{5/17} (x)	T _{12/17} (x)
1.00000	1.93771	4.38042	2.30901	2.88665	6.61333	2.30663	6.0	1.97771	2.11	4.917
1.00001	1.93770	4.38041	2.30900	3.14949	7.28163	2.30662	6.1	1.97549	3.09	4.9172
1.00002	1.93769	4.38040	2.30899	3.41896	7.95303	2.30661	6.2	1.97326	3.77	4.9174
1.00003	1.93768	4.38039	2.30898	3.68843	8.62443	2.30660	6.3	1.97103	4.45	4.9175
1.00004	1.93767	4.38038	2.30897	3.95790	9.29583	2.30659	6.4	1.96880	5.13	4.9176
1.00005	1.93766	4.38037	2.30896	4.22737	9.96723	2.30658	6.5	1.96657	5.81	4.9177
1.00006	1.93765	4.38036	2.30895	4.49684	10.63863	2.30657	6.6	1.96434	6.49	4.9178
1.00007	1.93764	4.38035	2.30894	4.76631	11.31003	2.30656	6.7	1.96211	7.17	4.9179
1.00008	1.93763	4.38034	2.30893	5.03578	11.98143	2.30655	6.8	1.95988	7.85	4.9180
1.00009	1.93762	4.38033	2.30892	5.30525	12.65283	2.30654	6.9	1.95765	8.53	4.9181
1.00010	1.93761	4.38032	2.30891	5.57472	13.32423	2.30653	7.0	1.95542	9.21	4.9182
1.00011	1.93760	4.38031	2.30890	5.84419	13.99563	2.30652	7.1	1.95319	9.89	4.9183
1.00012	1.93759	4.38030	2.30889	6.11366	14.66703	2.30651	7.2	1.95096	10.57	4.9184
1.00013	1.93758	4.38029	2.30888	6.38313	15.33843	2.30650	7.3	1.94873	11.25	4.9185
1.00014	1.93757	4.38028	2.30887	6.65260	16.00983	2.30649	7.4	1.94650	11.93	4.9186
1.00015	1.93756	4.38027	2.30886	6.92207	16.68123	2.30648	7.5	1.94427	12.61	4.9187
1.00016	1.93755	4.38026	2.30885	7.19154	17.35263	2.30647	7.6	1.94204	13.29	4.9188
1.00017	1.93754	4.38025	2.30884	7.46101	18.02403	2.30646	7.7	1.93981	13.97	4.9189
1.00018	1.93753	4.38024	2.30883	7.73048	18.69543	2.30645	7.8	1.93758	14.65	4.9190
1.00019	1.93752	4.38023	2.30882	8.00000	19.36683	2.30644	7.9	1.93535	15.33	4.9191
1.00020	1.93751	4.38022	2.30881	8.26950	20.03823	2.30643	8.0	1.93312	16.01	4.9192
1.00021	1.93750	4.38021	2.30880	8.53900	20.70963	2.30642	8.1	1.93089	16.69	4.9193
1.00022	1.93749	4.38020	2.30879	8.80850	21.38103	2.30641	8.2	1.92866	17.37	4.9194
1.00023	1.93748	4.38019	2.30878	9.07800	22.05243	2.30640	8.3	1.92643	18.05	4.9195
1.00024	1.93747	4.38018	2.30877	9.34750	22.72383	2.30639	8.4	1.92420	18.73	4.9196
1.00025	1.93746	4.38017	2.30876	9.61700	23.39523	2.30638	8.5	1.92197	19.41	4.9197
1.00026	1.93745	4.38016	2.30875	9.88650	24.06663	2.30637	8.6	1.91974	20.09	4.9198
1.00027	1.93744	4.38015	2.30874	10.15600	24.73803	2.30636	8.7	1.91751	20.77	4.9199
1.00028	1.93743	4.38014	2.30873	10.42550	25.40943	2.30635	8.8	1.91528	21.45	4.9200
1.00029	1.93742	4.38013	2.30872	10.69500	26.08083	2.30634	8.9	1.91305	22.13	4.9201
1.00030	1.93741	4.38012	2.30871	10.96450	26.75223	2.30633	9.0	1.91082	22.81	4.9202
1.00031	1.93740	4.38011	2.30870	11.23400	27.42363	2.30632	9.1	1.90859	23.49	4.9203
1.00032	1.93739	4.38010	2.30869	11.50350	28.09503	2.30631	9.2	1.90636	24.17	4.9204
1.00033	1.93738	4.38009	2.30868	11.77300	28.76643	2.30630	9.3	1.90413	24.85	4.9205
1.00034	1.93737	4.38008	2.30867	12.04250	29.43783	2.30629	9.4	1.90190	25.53	4.9206
1.00035	1.93736	4.38007	2.30866	12.31200	30.10923	2.30628	9.5	1.90000	26.21	4.9207
1.00036	1.93735	4.38006	2.30865	12.58150	30.78063	2.30627	9.6	1.89810	26.89	4.9208
1.00037	1.93734	4.38005	2.30864	12.85100	31.45203	2.30626	9.7	1.89620	27.57	4.9209
1.00038	1.93733	4.38004	2.30863	13.12050	32.12343	2.30625	9.8	1.89430	28.25	4.9210
1.00039	1.93732	4.38003	2.30862	13.39000	32.79483	2.30624	9.9	1.89240	28.93	4.9211
1.00040	1.93731	4.38002	2.30861	13.65950	33.46623	2.30623	10.0	1.89050	29.61	4.9212
1.00041	1.93730	4.38001	2.30860	13.92900	34.13763	2.30622				
1.00042	1.93729	4.38000	2.30859	14.19850	34.80903	2.30621				
1.00043	1.93728	4.37999	2.30858	14.46800	35.48043	2.30620				
1.00044	1.93727	4.37998	2.30857	14.73750	36.15183	2.30619				
1.00045	1.93726	4.37997	2.30856	15.00700	36.82323	2.30618				
1.00046	1.93725	4.37996	2.30855	15.27650	37.49463	2.30617				
1.00047	1.93724	4.37995	2.30854	15.54600	38.16603	2.30616				
1.00048	1.93723	4.37994	2.30853	15.81550	38.83743	2.30615				
1.00049	1.93722	4.37993	2.30852	16.08500	39.50883	2.30614				
1.00050	1.93721	4.37992	2.30851	16.35450	40.18023	2.30613				
1.00051	1.93720	4.37991	2.30850	16.62400	40.85163	2.30612				
1.00052	1.93719	4.37990	2.30849	16.89350	41.52303	2.30611				
1.00053	1.93718	4.37989	2.30848	17.16300	42.19443	2.30610				
1.00054	1.93717	4.37988	2.30847	17.43250	42.86583	2.30609				
1.00055	1.93716	4.37987	2.30846	17.70200	43.53723	2.30608				
1.00056	1.93715	4.37986	2.30845	17.97150	44.20863	2.30607				
1.00057	1.93714	4.37985	2.30844	18.24100	44.88003	2.30606				
1.00058	1.93713	4.37984	2.30843	18.51050	45.55143	2.30605				
1.00059	1.93712	4.37983	2.30842	18.78000	46.22283	2.30604				
1.00060	1.93711	4.37982	2.30841	19.04950	46.89423	2.30603				
1.00061	1.93710	4.37981	2.30840	19.31900	47.56563	2.30602				
1.00062	1.93709	4.37980	2.30839	19.58850	48.23703	2.30601				
1.00063	1.93708	4.37979	2.30838	19.85800	48.90843	2.30600				
1.00064	1.93707	4.37978	2.30837	20.12750	49.57983	2.30599				
1.00065	1.93706	4.37977	2.30836	20.39700	50.25123	2.30598				
1.00066	1.93705	4.37976	2.30835	20.66650	50.92263	2.30597				
1.00067	1.93704	4.37975	2.30834	20.93600	51.59403	2.30596				
1.00068	1.93703	4.37974	2.30833	21.20550	52.26543	2.30595				
1.00069	1.93702	4.37973	2.30832	21.47500	52.93683	2.30594				
1.00070	1.93701	4.37972	2.30831	21.74450	53.60823	2.30593				
1.00071	1.93700	4.37971	2.30830	22.01400	54.27963	2.30592				
1.00072	1.93699	4.37970	2.30829	22.28350	54.95103	2.30591				
1.00073	1.93698	4.37969	2.30828	22.55300	55.62243	2.30590				
1.00074	1.93697	4.37968	2.30827	22.82250	56.29383	2.30589				
1.00075	1.93696	4.37967	2.30826	23.09200	56.96523	2.30588				
1.00076	1.93695	4.37966	2.30825	23.36150	57.63663	2.30587				
1.00077	1.93694	4.37965	2.30824	23.63100	58.30803	2.30586				
1.00078	1.93693	4.37964	2.30823	23.90050	58.97943	2.30585				
1.00079	1.93692	4.37963	2.30822	24.17000	59.65083	2.30584				
1.00080	1.93691	4.37962	2.30821	24.43950	60.32223	2.30583				
1.00081	1.93690	4.37961	2.30820	24.70900	60.99363	2.30582				
1.00082	1.93689	4.37960	2.30819	24.97850	61.66503	2.30581				
1.00083	1.93688	4.37959	2.30818	25.24800	62.33643	2.30580				
1.00084	1.93687	4.37958	2.30817	25.51750	63.00783	2.30579				
1.00085	1.93686	4.37957	2.30816	25.78700	63.67923	2.30578				
1.00086	1.93685	4.37956	2.30815	26.05650	64.35063	2.30577				
1.00087	1.93684	4.37955	2.30814	26.32600	65.02203	2.30576				
1.00088	1.93683	4.37954	2.30813	26.59550	65.69343	2.30575				
1.00089	1.93682	4.37953	2.30812	26.86500	66.36483	2.30574				
1.00090	1.93681	4.37952	2.30811	27.13450	67.03623	2.30573				
1.00091	1.93680	4.37951	2.30810	27.40400	67.70763	2.30572				
1.00092	1.93679	4.37950	2.30809	27.67350	68.37903	2.30571				
1.00093	1.93678	4.37949	2.30808	27.94300	69.05043	2.30570				
1.00094	1.93677	4.37948	2.30807	28.21250	69.72183	2.30569				
1.00095	1.93676	4.37947	2.30806	28.48200	70.39323	2.30568				
1.00096	1.93675	4.37946	2.30805	28.75150	71.06463	2.30567				
1.00097	1.93674	4.37945	2.30804	29.02100	71.73603	2.30566				
1.00098	1.93673	4.37944	2.30803	29.29050	72.40743	2.30565				
1.00099	1.93672	4.37943	2.30802	29.56000	73.07883	2.30564				
1.00100	1.93671	4.37942	2.30801	29.82950	73.75023	2.30563				
1.00101	1.93670	4.37941	2.30800	30.09900	74.42163	2.30562				
1.00102	1.93669	4.37940	2.30799	30.36850	75.09303	2.30561				
1.00103	1.93668	4.37939	2.30798	30.63800	75.76443	2.30560				

$\alpha = 5/21$

x	$F_{5/21}(x)$	$H_{16/21}(x)$	$T_{5/21}(x)$	x	$F_{5/21}(x)$	$H_{16/21}(x)$	$T_{5/21}(x)$	x	$F_{5/21}(x)$	$H_{16/21}(x)$	$T_{5/21}(x)$
0.00000	0.00000	0.00000	0.00000	0.51000	1.09192	0.16443	0.29595	1.00000	0.00330	0.52221	0.42488
0.00001	0.00001	0.00001	0.00001	0.51001	1.09193	0.16443	0.29595	1.00001	0.00330	0.52221	0.42488
0.00002	0.00002	0.00002	0.00002	0.51002	1.09194	0.16443	0.29595	1.00002	0.00330	0.52221	0.42488
0.00003	0.00003	0.00003	0.00003	0.51003	1.09195	0.16443	0.29595	1.00003	0.00330	0.52221	0.42488
0.00004	0.00004	0.00004	0.00004	0.51004	1.09196	0.16443	0.29595	1.00004	0.00330	0.52221	0.42488
0.00005	0.00005	0.00005	0.00005	0.51005	1.09197	0.16443	0.29595	1.00005	0.00330	0.52221	0.42488
0.00006	0.00006	0.00006	0.00006	0.51006	1.09198	0.16443	0.29595	1.00006	0.00330	0.52221	0.42488
0.00007	0.00007	0.00007	0.00007	0.51007	1.09199	0.16443	0.29595	1.00007	0.00330	0.52221	0.42488
0.00008	0.00008	0.00008	0.00008	0.51008	1.09200	0.16443	0.29595	1.00008	0.00330	0.52221	0.42488
0.00009	0.00009	0.00009	0.00009	0.51009	1.09201	0.16443	0.29595	1.00009	0.00330	0.52221	0.42488
0.00010	0.00010	0.00010	0.00010	0.51010	1.09202	0.16443	0.29595	1.00010	0.00330	0.52221	0.42488
0.00011	0.00011	0.00011	0.00011	0.51011	1.09203	0.16443	0.29595	1.00011	0.00330	0.52221	0.42488
0.00012	0.00012	0.00012	0.00012	0.51012	1.09204	0.16443	0.29595	1.00012	0.00330	0.52221	0.42488
0.00013	0.00013	0.00013	0.00013	0.51013	1.09205	0.16443	0.29595	1.00013	0.00330	0.52221	0.42488
0.00014	0.00014	0.00014	0.00014	0.51014	1.09206	0.16443	0.29595	1.00014	0.00330	0.52221	0.42488
0.00015	0.00015	0.00015	0.00015	0.51015	1.09207	0.16443	0.29595	1.00015	0.00330	0.52221	0.42488
0.00016	0.00016	0.00016	0.00016	0.51016	1.09208	0.16443	0.29595	1.00016	0.00330	0.52221	0.42488
0.00017	0.00017	0.00017	0.00017	0.51017	1.09209	0.16443	0.29595	1.00017	0.00330	0.52221	0.42488
0.00018	0.00018	0.00018	0.00018	0.51018	1.09210	0.16443	0.29595	1.00018	0.00330	0.52221	0.42488
0.00019	0.00019	0.00019	0.00019	0.51019	1.09211	0.16443	0.29595	1.00019	0.00330	0.52221	0.42488
0.00020	0.00020	0.00020	0.00020	0.51020	1.09212	0.16443	0.29595	1.00020	0.00330	0.52221	0.42488
0.00021	0.00021	0.00021	0.00021	0.51021	1.09213	0.16443	0.29595	1.00021	0.00330	0.52221	0.42488
0.00022	0.00022	0.00022	0.00022	0.51022	1.09214	0.16443	0.29595	1.00022	0.00330	0.52221	0.42488
0.00023	0.00023	0.00023	0.00023	0.51023	1.09215	0.16443	0.29595	1.00023	0.00330	0.52221	0.42488
0.00024	0.00024	0.00024	0.00024	0.51024	1.09216	0.16443	0.29595	1.00024	0.00330	0.52221	0.42488
0.00025	0.00025	0.00025	0.00025	0.51025	1.09217	0.16443	0.29595	1.00025	0.00330	0.52221	0.42488
0.00026	0.00026	0.00026	0.00026	0.51026	1.09218	0.16443	0.29595	1.00026	0.00330	0.52221	0.42488
0.00027	0.00027	0.00027	0.00027	0.51027	1.09219	0.16443	0.29595	1.00027	0.00330	0.52221	0.42488
0.00028	0.00028	0.00028	0.00028	0.51028	1.09220	0.16443	0.29595	1.00028	0.00330	0.52221	0.42488
0.00029	0.00029	0.00029	0.00029	0.51029	1.09221	0.16443	0.29595	1.00029	0.00330	0.52221	0.42488
0.00030	0.00030	0.00030	0.00030	0.51030	1.09222	0.16443	0.29595	1.00030	0.00330	0.52221	0.42488
0.00031	0.00031	0.00031	0.00031	0.51031	1.09223	0.16443	0.29595	1.00031	0.00330	0.52221	0.42488
0.00032	0.00032	0.00032	0.00032	0.51032	1.09224	0.16443	0.29595	1.00032	0.00330	0.52221	0.42488
0.00033	0.00033	0.00033	0.00033	0.51033	1.09225	0.16443	0.29595	1.00033	0.00330	0.52221	0.42488
0.00034	0.00034	0.00034	0.00034	0.51034	1.09226	0.16443	0.29595	1.00034	0.00330	0.52221	0.42488
0.00035	0.00035	0.00035	0.00035	0.51035	1.09227	0.16443	0.29595	1.00035	0.00330	0.52221	0.42488
0.00036	0.00036	0.00036	0.00036	0.51036	1.09228	0.16443	0.29595	1.00036	0.00330	0.52221	0.42488
0.00037	0.00037	0.00037	0.00037	0.51037	1.09229	0.16443	0.29595	1.00037	0.00330	0.52221	0.42488
0.00038	0.00038	0.00038	0.00038	0.51038	1.09230	0.16443	0.29595	1.00038	0.00330	0.52221	0.42488
0.00039	0.00039	0.00039	0.00039	0.51039	1.09231	0.16443	0.29595	1.00039	0.00330	0.52221	0.42488
0.00040	0.00040	0.00040	0.00040	0.51040	1.09232	0.16443	0.29595	1.00040	0.00330	0.52221	0.42488
0.00041	0.00041	0.00041	0.00041	0.51041	1.09233	0.16443	0.29595	1.00041	0.00330	0.52221	0.42488
0.00042	0.00042	0.00042	0.00042	0.51042	1.09234	0.16443	0.29595	1.00042	0.00330	0.52221	0.42488
0.00043	0.00043	0.00043	0.00043	0.51043	1.09235	0.16443	0.29595	1.00043	0.00330	0.52221	0.42488
0.00044	0.00044	0.00044	0.00044	0.51044	1.09236	0.16443	0.29595	1.00044	0.00330	0.52221	0.42488
0.00045	0.00045	0.00045	0.00045	0.51045	1.09237	0.16443	0.29595	1.00045	0.00330	0.52221	0.42488
0.00046	0.00046	0.00046	0.00046	0.51046	1.09238	0.16443	0.29595	1.00046	0.00330	0.52221	0.42488
0.00047	0.00047	0.00047	0.00047	0.51047	1.09239	0.16443	0.29595	1.00047	0.00330	0.52221	0.42488
0.00048	0.00048	0.00048	0.00048	0.51048	1.09240	0.16443	0.29595	1.00048	0.00330	0.52221	0.42488
0.00049	0.00049	0.00049	0.00049	0.51049	1.09241	0.16443	0.29595	1.00049	0.00330	0.52221	0.42488
0.00050	0.00050	0.00050	0.00050	0.51050	1.09242	0.16443	0.29595	1.00050	0.00330	0.52221	0.42488

TABLE 24A. Lanchester-Clifford-Schlafli Functions $F_{\alpha}(x)$, $H_{1-\alpha}(x)$, and

$T_{\alpha}(x)$ for $\alpha = 5/21$ and x from 0.00 to 1.50.

$\alpha = 5/21$

x	F _{5/21} (x)	H _{16/21} (x)	T _{5/21} (x)	x	F _{5/21} (x)	H _{16/21} (x)	T _{5/21} (x)	x	F _{5/21} (x)	H _{16/21} (x)	T _{5/21} (x)
1.50	3.9441	1.1492	0.2939	2.0	7.1623	2.2459	0.3055	6.0	561.9609	189.1128	0.31693
1.51	3.9947	1.1704	0.2979	2.1	8.0919	2.4933	0.3173	6.1	625.1442	198.0938	0.31693
1.52	4.0470	1.1934	0.3017	2.2	9.0946	2.7425	0.3288	6.2	690.0462	207.2906	0.31693
1.53	4.0916	1.2185	0.3052	2.3	10.1429	3.0142	0.3403	6.3	756.4807	216.8096	0.31693
1.54	4.1385	1.2457	0.3085	2.4	11.2309	3.3093	0.3519	6.4	824.4871	226.7506	0.31693
1.55	4.1876	1.2750	0.3116	2.5	12.3543	3.6284	0.3635	6.5	894.0298	237.1137	0.31693
1.56	4.2390	1.3064	0.3145	2.6	13.5180	3.9725	0.3751	6.6	965.1638	247.9088	0.31693
1.57	4.2927	1.3400	0.3172	2.7	14.7280	4.3426	0.3867	6.7	1037.9439	259.1370	0.31693
1.58	4.3487	1.3758	0.3197	2.8	16.0000	4.7390	0.3983	6.8	1112.4249	270.8082	0.31693
1.59	4.4070	1.4139	0.3220	2.9	17.3400	5.1622	0.4100	6.9	1188.6635	282.9323	0.31693
1.60	4.4676	1.4543	0.3241	3.0	18.7543	5.6136	0.4218	7.0	1266.7150	295.5194	0.31693
1.61	4.5305	1.4971	0.3260	3.1	20.2480	6.0944	0.4337	7.1	1346.5449	308.5706	0.31693
1.62	4.5956	1.5423	0.3277	3.2	21.8270	6.6058	0.4457	7.2	1428.2188	322.0969	0.31693
1.63	4.6629	1.5899	0.3292	3.3	23.4970	7.1490	0.4578	7.3	1511.6921	336.1082	0.31693
1.64	4.7324	1.6400	0.3305	3.4	25.2640	7.7252	0.4699	7.4	1596.9199	350.6154	0.31693
1.65	4.8041	1.6926	0.3317	3.5	27.1340	8.3366	0.4821	7.5	1683.8588	365.6286	0.31693
1.66	4.8780	1.7477	0.3328	3.6	29.1130	8.9844	0.4944	7.6	1772.5649	381.1578	0.31693
1.67	4.9541	1.8054	0.3338	3.7	31.2070	9.6698	0.5068	7.7	1863.0049	397.2130	0.31693
1.68	5.0324	1.8657	0.3347	3.8	33.4220	10.3940	0.5193	7.8	1955.2449	413.8052	0.31693
1.69	5.1129	1.9287	0.3355	3.9	35.7640	11.1582	0.5318	7.9	2049.3519	430.9423	0.31693
1.70	5.1956	1.9944	0.3362	4.0	38.2400	11.9646	0.5443	8.0	2145.2919	448.6354	0.31693
1.71	5.2805	2.0628	0.3368	4.1	40.8570	12.8144	0.5568	8.1	2243.0319	466.8945	0.31693
1.72	5.3676	2.1339	0.3373	4.2	43.6200	13.7090	0.5693	8.2	2342.5479	485.7296	0.31693
1.73	5.4569	2.2077	0.3377	4.3	46.5360	14.6506	0.5818	8.3	2443.8079	505.1517	0.31693
1.74	5.5484	2.2843	0.3380	4.4	49.6020	15.6404	0.5943	8.4	2546.7879	525.1718	0.31693
1.75	5.6421	2.3637	0.3382	4.5	52.8250	16.6806	0.6068	8.5	2651.4649	545.8089	0.31693
1.76	5.7380	2.4459	0.3384	4.6	56.2120	17.7736	0.6193	8.6	2757.8149	567.0740	0.31693
1.77	5.8361	2.5309	0.3385	4.7	59.7700	18.9214	0.6318	8.7	2865.8149	588.9771	0.31693
1.78	5.9364	2.6187	0.3386	4.8	63.5040	20.1262	0.6443	8.8	2975.4419	611.5292	0.31693
1.79	6.0389	2.7093	0.3387	4.9	67.4220	21.3904	0.6568	8.9	3086.6819	634.7423	0.31693
1.80	6.1436	2.8027	0.3387	5.0	71.5320	22.7162	0.6693	9.0	3199.5219	658.6274	0.31693
1.81	6.2505	2.8989	0.3387	5.1	75.8420	24.1050	0.6818	9.1	3313.9619	683.1945	0.31693
1.82	6.3596	2.9979	0.3387	5.2	80.3600	25.5592	0.6943	9.2	3429.9919	708.4536	0.31693
1.83	6.4709	3.0997	0.3387	5.3	85.0940	27.0814	0.7068	9.3	3547.6119	734.4147	0.31693
1.84	6.5844	3.2043	0.3387	5.4	90.0520	28.6746	0.7193	9.4	3666.8219	761.0878	0.31693
1.85	6.7001	3.3117	0.3387	5.5	95.2420	30.3414	0.7318	9.5	3787.6219	788.4829	0.31693
1.86	6.8180	3.4219	0.3387	5.6	100.6720	32.0852	0.7443	9.6	3909.9919	816.6090	0.31693
1.87	6.9381	3.5349	0.3387	5.7	106.3500	33.9084	0.7568	9.7	4033.9419	845.4771	0.31693
1.88	7.0604	3.6507	0.3387	5.8	112.2840	35.8146	0.7693	9.8	4159.4719	875.0982	0.31693
1.89	7.1850	3.7693	0.3387	5.9	118.4820	37.8062	0.7818	9.9	4286.5819	905.4833	0.31693
1.90	7.3119	3.8907	0.3387	6.0	124.9420	39.8854	0.7943	10.0	4415.2719	936.6444	0.31693
1.91	7.4411	4.0149	0.3387								
1.92	7.5726	4.1419	0.3387								
1.93	7.7064	4.2717	0.3387								
1.94	7.8425	4.4043	0.3387								
1.95	7.9809	4.5397	0.3387								
1.96	8.1216	4.6779	0.3387								
1.97	8.2646	4.8189	0.3387								
1.98	8.4099	4.9627	0.3387								
1.99	8.5575	5.1093	0.3387								
2.00	8.7074	5.2587	0.3387								

TABLE 24B. Lanchester-Clifford-Schlafli Functions $F_\alpha(x)$, $H_{1-\alpha}(x)$, and

$T_\alpha(x)$ for $\alpha = 5/21$ and x from 1.50 to 10.0.

$\alpha = 16/21$

x	$F_{16/21}(x)$	$H_{5/21}(x)$	$T_{16/21}(x)$	x	$F_{16/21}(x)$	$H_{5/21}(x)$	$T_{16/21}(x)$	x	$F_{16/21}(x)$	$H_{5/21}(x)$	$T_{16/21}(x)$
0.01	1.00000	0.01392	0.00000	0.51	1.08950	2.31556	2.10275	1.01	1.32112	3.49387	2.70972
0.02	1.00003	0.02771	0.00001	0.52	1.09044	2.31777	2.11222	1.02	1.32970	3.49533	2.71752
0.03	1.00009	0.04151	0.00005	0.53	1.09102	2.32011	2.12209	1.03	1.33836	3.49679	2.72532
0.04	1.00018	0.05531	0.00011	0.54	1.09168	2.32254	2.13189	1.04	1.34704	3.49826	2.73312
0.05	1.00029	0.06911	0.00022	0.55	1.09241	2.32506	2.14169	1.05	1.35576	3.49974	2.74092
0.06	1.00042	0.08291	0.00037	0.56	1.09321	2.32766	2.15149	1.06	1.36452	3.50123	2.74872
0.07	1.00058	0.09671	0.00054	0.57	1.09407	2.33034	2.16129	1.07	1.37332	3.50272	2.75652
0.08	1.00076	0.11051	0.00073	0.58	1.09500	2.33310	2.17109	1.08	1.38216	3.50422	2.76432
0.09	1.00096	0.12431	0.00095	0.59	1.09600	2.33594	2.18089	1.09	1.39104	3.50574	2.77212
0.10	1.00118	0.13811	0.00120	0.60	1.09707	2.33886	2.19069	1.10	1.40000	3.50728	2.77992
0.11	1.00142	0.15191	0.00148	0.61	1.09821	2.34186	2.20049	1.11	1.40904	3.50884	2.78772
0.12	1.00168	0.16571	0.00179	0.62	1.09942	2.34494	2.21029	1.12	1.41816	3.51042	2.79552
0.13	1.00196	0.17951	0.00213	0.63	1.10069	2.34809	2.22009	1.13	1.42736	3.51202	2.80332
0.14	1.00226	0.19331	0.00249	0.64	1.10191	2.35131	2.22989	1.14	1.43664	3.51364	2.81112
0.15	1.00258	0.20711	0.00287	0.65	1.10317	2.35460	2.23969	1.15	1.44600	3.51528	2.81892
0.16	1.00292	0.22091	0.00327	0.66	1.10447	2.35796	2.24949	1.16	1.45544	3.51694	2.82672
0.17	1.00328	0.23471	0.00369	0.67	1.10581	2.36139	2.25929	1.17	1.46496	3.51862	2.83452
0.18	1.00366	0.24851	0.00413	0.68	1.10719	2.36489	2.26909	1.18	1.47456	3.52032	2.84232
0.19	1.00406	0.26231	0.00459	0.69	1.10861	2.36846	2.27889	1.19	1.48424	3.52204	2.85012
0.20	1.00448	0.27611	0.00507	0.70	1.11007	2.37209	2.28869	1.20	1.49400	3.52378	2.85792
0.21	1.00492	0.28991	0.00557	0.71	1.11157	2.37579	2.29849	1.21	1.50384	3.52554	2.86572
0.22	1.00538	0.30371	0.00609	0.72	1.11311	2.37956	2.30829	1.22	1.51376	3.52732	2.87352
0.23	1.00586	0.31751	0.00663	0.73	1.11469	2.38339	2.31809	1.23	1.52376	3.52912	2.88132
0.24	1.00636	0.33131	0.00719	0.74	1.11631	2.38729	2.32789	1.24	1.53384	3.53094	2.88912
0.25	1.00688	0.34511	0.00777	0.75	1.11797	2.39126	2.33769	1.25	1.54400	3.53278	2.89692
0.26	1.00742	0.35891	0.00837	0.76	1.11967	2.39529	2.34749	1.26	1.55424	3.53464	2.90472
0.27	1.00798	0.37271	0.00899	0.77	1.12141	2.39939	2.35729	1.27	1.56456	3.53652	2.91252
0.28	1.00856	0.38651	0.00963	0.78	1.12319	2.40356	2.36709	1.28	1.57496	3.53842	2.92032
0.29	1.00916	0.40031	0.01029	0.79	1.12501	2.40779	2.37689	1.29	1.58544	3.54034	2.92812
0.30	1.00978	0.41411	0.01097	0.80	1.12687	2.41209	2.38669	1.30	1.59600	3.54228	2.93592
0.31	1.01042	0.42791	0.01167	0.81	1.12877	2.41646	2.39649	1.31	1.60664	3.54424	2.94372
0.32	1.01108	0.44171	0.01239	0.82	1.13071	2.42089	2.40629	1.32	1.61736	3.54622	2.95152
0.33	1.01176	0.45551	0.01313	0.83	1.13269	2.42539	2.41609	1.33	1.62816	3.54822	2.95932
0.34	1.01246	0.46931	0.01389	0.84	1.13471	2.42996	2.42589	1.34	1.63904	3.55024	2.96712
0.35	1.01318	0.48311	0.01467	0.85	1.13677	2.43459	2.43569	1.35	1.65000	3.55228	2.97492
0.36	1.01392	0.49691	0.01547	0.86	1.13887	2.43929	2.44549	1.36	1.66104	3.55434	2.98272
0.37	1.01468	0.51071	0.01629	0.87	1.14101	2.44406	2.45529	1.37	1.67216	3.55642	2.99052
0.38	1.01546	0.52451	0.01713	0.88	1.14319	2.44889	2.46509	1.38	1.68336	3.55852	2.99832
0.39	1.01626	0.53831	0.01799	0.89	1.14541	2.45379	2.47489	1.39	1.69464	3.56064	3.00612
0.40	1.01708	0.55211	0.01887	0.90	1.14767	2.45876	2.48469	1.40	1.70600	3.56278	3.01392
0.41	1.01792	0.56591	0.01977	0.91	1.14997	2.46379	2.49449	1.41	1.71744	3.56494	3.02172
0.42	1.01878	0.57971	0.02069	0.92	1.15231	2.46889	2.50429	1.42	1.72896	3.56712	3.02952
0.43	1.01966	0.59351	0.02163	0.93	1.15469	2.47406	2.51409	1.43	1.74056	3.56932	3.03732
0.44	1.02056	0.60731	0.02259	0.94	1.15711	2.47929	2.52389	1.44	1.75224	3.57154	3.04512
0.45	1.02148	0.62111	0.02357	0.95	1.15957	2.48456	2.53369	1.45	1.76400	3.57378	3.05292
0.46	1.02242	0.63491	0.02457	0.96	1.16207	2.48989	2.54349	1.46	1.77584	3.57604	3.06072
0.47	1.02338	0.64871	0.02559	0.97	1.16461	2.49529	2.55329	1.47	1.78776	3.57832	3.06852
0.48	1.02436	0.66251	0.02663	0.98	1.16719	2.50076	2.56309	1.48	1.79976	3.58062	3.07632
0.49	1.02536	0.67631	0.02769	0.99	1.16981	2.50629	2.57289	1.49	1.81184	3.58294	3.08412
0.50	1.02638	0.69011	0.02877	1.00	1.17247	2.51189	2.58269	1.50	1.82400	3.58528	3.09192

TABLE 25A. Lanchester-Clifford-Schlafli Functions $F_{\alpha}(x)$, $H_{1-\alpha}(x)$, and

$T_{\alpha}(x)$ for $\alpha = 16/21$ and x from 0.00 to 1.50.

$\alpha = 16/21$

x	$F_{16/21}(x)$	$H_{5/21}(x)$	$T_{16/21}(x)$	x	$F_{16/21}(x)$	$H_{5/21}(x)$	$T_{16/21}(x)$	x	$F_{16/21}(x)$	$H_{5/21}(x)$	$T_{16/21}(x)$
0.7123	1.86444	5.54700	2.97559	2.0	2.73204	8.47396	3.80577	6.0	105.47176	33.67077	3.15277
1.5239	1.87783	5.59333	2.97880	2.5	3.09893	9.27083	3.85977	6.5	105.47176	33.67077	3.15277
1.7239	1.89137	5.64016	2.98216	3.0	3.46093	10.09083	3.91408	7.0	105.47176	33.67077	3.15277
1.9086	1.90504	5.68723	2.98536	3.5	3.81823	10.90952	3.96877	7.5	105.47176	33.67077	3.15277
1.9886	1.91886	5.73462	2.98850	4.0	4.17083	11.71898	4.02383	8.0	105.47176	33.67077	3.15277
1.9919	1.93283	5.78237	2.99159	4.5	4.51963	12.51964	4.07923	8.5	105.47176	33.67077	3.15277
1.9959	1.94694	5.83047	2.99460	5.0	4.86463	13.31190	4.13483	9.0	105.47176	33.67077	3.15277
1.9999	1.96119	5.87887	2.99760	5.5	5.20583	14.09590	4.19063	9.5	105.47176	33.67077	3.15277
2.0040	1.97560	5.92752	2.99959	6.0	5.54343	14.87160	4.24663	10.0	105.47176	33.67077	3.15277
2.0081	1.99019	5.97647	3.00159	6.5	5.87743	15.63890	4.30283	10.5	105.47176	33.67077	3.15277
2.0122	1.99990	6.02572	3.00359	7.0	6.20783	16.39790	4.35923	11.0	105.47176	33.67077	3.15277
2.0163	2.00970	6.07527	3.00559	7.5	6.53463	17.14860	4.41583	11.5	105.47176	33.67077	3.15277
2.0204	2.01959	6.12512	3.00759	8.0	6.85783	17.89090	4.47263	12.0	105.47176	33.67077	3.15277
2.0245	2.02959	6.17527	3.00959	8.5	7.17743	18.62490	4.52963	12.5	105.47176	33.67077	3.15277
2.0286	2.03970	6.22562	3.01159	9.0	7.49343	19.35060	4.58683	13.0	105.47176	33.67077	3.15277
2.0327	2.04990	6.27627	3.01359	9.5	7.80583	20.06790	4.64423	13.5	105.47176	33.67077	3.15277
2.0368	2.06019	6.32722	3.01559	10.0	8.11463	20.77690	4.70183	14.0	105.47176	33.67077	3.15277
2.0409	2.07059	6.37847	3.01759	10.5	8.41983	21.47760	4.75963	14.5	105.47176	33.67077	3.15277
2.0450	2.08109	6.42992	3.01959	11.0	8.72143	22.17000	4.81763	15.0	105.47176	33.67077	3.15277
2.0491	2.09169	6.48167	3.02159	11.5	9.01943	22.85410	4.87583	15.5	105.47176	33.67077	3.15277
2.0532	2.10239	6.53372	3.02359	12.0	9.31383	23.52990	4.93423	16.0	105.47176	33.67077	3.15277
2.0573	2.11319	6.58607	3.02559	12.5	9.60463	24.19740	4.99283	16.5	105.47176	33.67077	3.15277
2.0614	2.12409	6.63872	3.02759	13.0	9.89183	24.85660	5.05163	17.0	105.47176	33.67077	3.15277
2.0655	2.13509	6.69167	3.02959	13.5	10.17543	25.50760	5.11063	17.5	105.47176	33.67077	3.15277
2.0696	2.14619	6.74492	3.03159	14.0	10.45543	26.15030	5.16983	18.0	105.47176	33.67077	3.15277
2.0737	2.15739	6.79847	3.03359	14.5	10.73183	26.78470	5.22923	18.5	105.47176	33.67077	3.15277
2.0778	2.16869	6.85232	3.03559	15.0	11.00463	27.41090	5.28883	19.0	105.47176	33.67077	3.15277
2.0819	2.18009	6.90647	3.03759	15.5	11.27383	28.02890	5.34863	19.5	105.47176	33.67077	3.15277
2.0860	2.19159	6.96092	3.03959	16.0	11.53943	28.63870	5.40863	20.0	105.47176	33.67077	3.15277
2.0901	2.20319	7.01567	3.04159	16.5	11.80143	29.24030	5.46883	20.5	105.47176	33.67077	3.15277
2.0942	2.21489	7.07072	3.04359	17.0	12.05983	29.83370	5.52923	21.0	105.47176	33.67077	3.15277
2.0983	2.22669	7.12607	3.04559	17.5	12.31463	30.41890	5.58983	21.5	105.47176	33.67077	3.15277
2.1024	2.23859	7.18172	3.04759	18.0	12.56583	31.00600	5.65063	22.0	105.47176	33.67077	3.15277
2.1065	2.25059	7.23777	3.04959	18.5	12.81343	31.58490	5.71163	22.5	105.47176	33.67077	3.15277
2.1106	2.26269	7.29412	3.05159	19.0	13.05743	32.16560	5.77283	23.0	105.47176	33.67077	3.15277
2.1147	2.27489	7.35077	3.05359	19.5	13.29783	32.73810	5.83423	23.5	105.47176	33.67077	3.15277
2.1188	2.28719	7.40772	3.05559	20.0	13.53463	33.31240	5.89583	24.0	105.47176	33.67077	3.15277
2.1229	2.29959	7.46497	3.05759	20.5	13.76783	33.88860	5.95763	24.5	105.47176	33.67077	3.15277
2.1270	2.31209	7.52252	3.05959	21.0	14.00743	34.46670	6.01963	25.0	105.47176	33.67077	3.15277
2.1311	2.32469	7.58037	3.06159	21.5	14.24343	35.04670	6.08183	25.5	105.47176	33.67077	3.15277
2.1352	2.33729	7.63852	3.06359	22.0	14.47583	35.62860	6.14423	26.0	105.47176	33.67077	3.15277
2.1393	2.35009	7.69697	3.06559	22.5	14.70463	36.21240	6.20683	26.5	105.47176	33.67077	3.15277
2.1434	2.36289	7.75572	3.06759	23.0	14.93983	36.79810	6.26963	27.0	105.47176	33.67077	3.15277
2.1475	2.37579	7.81477	3.06959	23.5	15.17143	37.38570	6.33263	27.5	105.47176	33.67077	3.15277
2.1516	2.38869	7.87402	3.07159	24.0	15.40943	37.97520	6.39583	28.0	105.47176	33.67077	3.15277
2.1557	2.40169	7.93347	3.07359	24.5	15.64383	38.56660	6.45923	28.5	105.47176	33.67077	3.15277
2.1598	2.41469	7.99312	3.07559	25.0	15.87463	39.15990	6.52283	29.0	105.47176	33.67077	3.15277
2.1639	2.42769	8.05297	3.07759	25.5	16.10183	39.75510	6.58663	29.5	105.47176	33.67077	3.15277
2.1680	2.44069	8.11302	3.07959	26.0	16.32543	40.35220	6.65063	30.0	105.47176	33.67077	3.15277
2.1721	2.45369	8.17327	3.08159	26.5	16.54543	40.95130	6.71483	30.5	105.47176	33.67077	3.15277
2.1762	2.46669	8.23372	3.08359	27.0	16.76183	41.55240	6.77923	31.0	105.47176	33.67077	3.15277
2.1803	2.47969	8.29437	3.08559	27.5	16.97463	42.15550	6.84383	31.5	105.47176	33.67077	3.15277
2.1844	2.49269	8.35522	3.08759	28.0	17.18383	42.76060	6.90863	32.0	105.47176	33.67077	3.15277
2.1885	2.50569	8.41627	3.08959	28.5	17.38943	43.36770	6.97363	32.5	105.47176	33.67077	3.15277
2.1926	2.51869	8.47752	3.09159	29.0	17.59143	43.97680	7.03883	33.0	105.47176	33.67077	3.15277
2.1967	2.53169	8.53897	3.09359	29.5	17.78983	44.58790	7.10423	33.5	105.47176	33.67077	3.15277
2.2008	2.54469	8.60062	3.09559	30.0	17.98463	45.19990	7.16983	34.0	105.47176	33.67077	3.15277
2.2049	2.55769	8.66247	3.09759	30.5	18.17583	45.81390	7.23563	34.5	105.47176	33.67077	3.15277
2.2090	2.57069	8.72452	3.09959	31.0	18.36343	46.42990	7.30163	35.0	105.47176	33.67077	3.15277
2.2131	2.58369	8.78677	3.10159	31.5	18.54743	47.04790	7.36783	35.5	105.47176	33.67077	3.15277
2.2172	2.59669	8.84922	3.10359	32.0	18.72783	47.66790	7.43423	36.0	105.47176	33.67077	3.15277
2.2213	2.60969	8.91187	3.10559	32.5	18.90463	48.28990	7.50083	36.5	105.47176	33.67077	3.15277
2.2254	2.62269	8.97472	3.10759	33.0	19.07783	48.91390	7.56763	37.0	105.47176	33.67077	3.15277
2.2295	2.63569	9.03777	3.10959	33.5	19.24743	49.53990	7.63463	37.5	105.47176	33.67077	3.15277
2.2336	2.64869	9.10102	3.11159	34.0	19.41343	50.16790	7.70183	38.0	105.47176	33.67077	3.15277
2.2377	2.66169	9.16447	3.11359	34.5	19.57583	50.79790	7.76923	38.5	105.47176	33.67077	3.15277
2.2418	2.67469	9.22812	3.11559	35.0	19.73463	51.42990	7.83683	39.0	105.47176	33.67077	3.15277
2.2459	2.68769	9.29197	3.11759	35.5	19.88983	52.06390	7.90463	39.5	105.47176	33.67077	3.15277
2.2500	2.70069	9.35602	3.11959	36.0	20.04143	52.69990	7.97263	40.0	105.47176	33.67077	3.15277
2.2541	2.71369	9.42027	3.12159	36.5	20.18943	53.33790	8.04083	40.5	105.47176	33.67077	3.15277
2.2582	2.72669	9.48472	3.12359	37.0	20.33383	53.97790	8.10923	41.0	105.47176	33.67077	3.15277
2.2623	2.73969	9.54937	3.12559	37.5	20.47463	54.61990	8.17783	41.5	105.47176	33.67077	3.15277
2.2664	2.75269	9.61422	3.12759	38.0	20.61183	55.26390	8.24663	42.0	105.47176	33.67077	3.15277
2.2705	2.76569	9.67927	3.12959	38.5	20.74543	55.90990	8.31563	42.5	105.47176	33.67077	3.15277
2.2746	2.77869	9.74452	3.13159	39.0	20.87543	56.55790	8.38483	43.0	105.47176	33.67077	3.15277
2.2787	2.79169	9.80997	3.13359	39.5	21.00183	57.20790	8.45423	43.5	105.47176	33.67077	3.15277
2.2828	2.80469	9.87562	3.13559	40.0	21.12463	57.85990	8.52383	44.0	105.47176	33.67077	3.15277
2.2869	2.81769	9.94147	3.13759	40.5	21.24383	58.51390	8.59363	44.5	105.47176	33.67077	3.15277
2.2910	2.83069	10.00752	3.13959	41.0	21.35943	59.16990	8.66363	45.0	105.47176	33.67077	3.15277
2.2951	2.84369	10.07377	3.14159	41.5	21.47143	59.82790	8.73383	45.5	105.47176	33.67077	3.15277
2.2992	2.85669	10.14022	3.14359	42.0	21.57983	60.48790	8.80423	46.0	105.47176	33.67077	3.15277
2.3033	2.86969	10.20687	3.14559	42.5	21.68463	61.14990	8.87483	46.5	105.47176	33.67077	3.15277
2.3074	2.88269	10.27372	3.14759	43.0	21.78583	61.81390</					