

Tables of Derivatives for Damped Vibrations

W. E. MILNE, Ph.D.
Professor of Mathematics
Oregon State College

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Tables of Derivatives for Damped Vibrations*

By W. E. MILNE

INTRODUCTION

1. Relation to Tables of Damped Vibrations. The tables herewith presented are designed to supplement the Tables of Damped Vibrations which appeared as *University of Oregon Publication, Mathematics Series*, vol. 1, no. 1, March, 1929. The latter tables give the values of u in terms of x for certain solutions of the differential equation

$$(1) \quad \frac{d^2u}{dx^2} \pm \frac{1}{2} \left(\frac{du}{dx} \right)^2 + 2b \frac{du}{dx} + u = 0,$$

together with special tables giving the values of u and x at the maxima, minima, and points of inflection. The purposes and use of the tables are discussed in the introduction to that publication, and need not be treated again here.

The present set of supplementary tables gives the values of $-du/dx$ for the same solutions of (1) as are tabulated in Tables of Damped Vibrations, so that Table XV of this publication is to be used with Table IV of the former, and Table XVI with Table V.

2. Necessity for Tables of Derivatives. The need for a table of derivatives to be used in conjunction with the tables already published arises from the fact that each particular solution of (1) requires *two* conditions for its determination. Thus for example if the initial values of u and du/dx are given, the corresponding solution is uniquely determined but cannot in fact be found directly from tables that give the value of u alone, since any given value of u will occur in many places in the table. This difficulty is not encountered if it is known that the initial point is maximum, minimum, or point of inflection, as the special tables already published enable one to locate the proper particular solution. The specific need for the tables of derivatives was encountered in an attempt to apply the Tables of

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Damped Vibrations to the problem of the surge tank with a throttling ring, where the differential equation controlling the water level in the tank can be reduced to equation (1) by appropriate transformations, but where the initial point is not the point of inflection, as is the case in the absence of the throttling ring. It is hoped that the publication of the Tables of Derivatives will greatly extend the value and usefulness of the Tables of Damped Vibrations.

3. Two-Way Interpolation. Since problems involving the combined use of Tables IV and XV or of Tables V and XVI will necessarily lead to a considerable amount of two-way interpolation, it will be convenient to use a systematic method for performing such interpolations. Among the many formulas available the one given below is simple in operation and sufficiently accurate for most of the tables.*

In the diagram (2) below is shown a section of a table (for definiteness consider Table IV) in which the independent variables are x and a , and the dependent variable is u . Let the interval between successive entries of x be denoted by h , and the interval between successive entries of a be denoted by k , so that $x_1 - x_0 = x_2 - x_1 = h$, $a_1 - a_0 = a_2 - a_1 = k$, etc.

		a_0	a_1	a_2	
	—	—	—	—	—
(2)	x_0	u_{00}	u_{01}	u_{02}	—
	x_1	u_{10}	u_{11}	—	—
	x_2	u_{20}	—	—	—
	—	—	—	—	—

The entries in the table which are not used in the interpolation are indicated by dashes. From the values above we form the following differences:

$$\begin{aligned}
 D_x &= u_{10} - u_{00}, \\
 D_a &= u_{01} - u_{00}, \\
 (3) \quad D_{xx} &= u_{20} - 2u_{10} + u_{00}, \\
 D_{xa} &= u_{11} + u_{00} - u_{10} - u_{01}, \\
 D_{aa} &= u_{02} - 2u_{01} + u_{00}.
 \end{aligned}$$

* In Tables V and XVI interpolation will not be accurate when the value of u at the head of the column is nearly equal to $2b^2$. In such cases graphic methods are probably to be preferred.

Now if u represents the desired value corresponding to a pair of values x and a , where $x_0 < x < x_1$, $a_0 < a < a_1$, the interpolation formula may be written in the form

$$(4) \quad u = u_{00} + D_x(x-x_0)/h + D_a(a-a_0)/k \\ + D_{xx}(x-x_0)(x-x_1)/2h^2 + D_{xa}(x-x_0)(a-a_0)/hk \\ + D_{aa}(a-a_0)(a-a_1)/2k^2.$$

EXAMPLE 1. From Table IV let us find u corresponding to $b=0.5$, $x=1.357$, $a=1.568$. The values taken from Table IV are

	$a_0=1.5$	$a_1=1.6$	$a_2=1.7$
$x_0=1.3$	.8112	.8692	.9277
$x_1=1.4$	.7424	.7965	
$x_2=1.5$	.6753		

Then we have from (3)

$D_x = -.0688$	$(x-x_0)/h$	=	.57
$D_a = .0580$	$(a-a_0)/k$	=	.68
$D_{xx} = .0017$	$(x-x_0)(x-x_1)/2h^2$	=	-.123
$D_{xa} = -.0039$	$(x-x_0)(a-a_0)/hk$	=	.388
$D_{aa} = .0005$	$(a-a_0)(a-a_1)/2k^2$	=	-.109,

whence by direct substitution into (4) we obtain $u = 0.8096$. ANS.

4. Simultaneous Inverse Interpolation. When values of u and du/dx are given and we desire to find the corresponding values of x and a from Tables IV and XV we encounter a sort of simultaneous inverse interpolation which is not generally familiar. We shall therefore explain the procedure in considerable detail by means of numerical examples.

EXAMPLE 2. Given $b=0.4$, $u=0.8$, $du/dx=-0.6$; to find a and x .

It is convenient to divide the work into steps, as follows:

First Step. Approximate location of a and x by graphic method. Turning to Table IV for $b=0.4$, we take a value of x , say $x=0.7$, and by ordinary linear interpolation we find the approximate value of a at which $u=0.8$. In this case we find $a=0.989$. Next we take $x=0.8$ and again find the value of a for which $u=0.8$, and proceeding in this manner we obtain a table of pairs of values of x and a for which $u=0.8$, thus

$x = 0.7$	0.8	0.9	1.0	1.1	1.2
$a = .989$	1.051	1.125	1.210	1.309	1.424

Next turning to Table XV we find a similar set of values of x and a which give $du/dx=-0.6$, thus

$x = 0.7$	0.8	0.9	1.0	1.1	1.2
$a = 1.308$	1.231	1.181	1.151	1.138	1.138

From these data we readily plot the two curves shown in Figure 1.

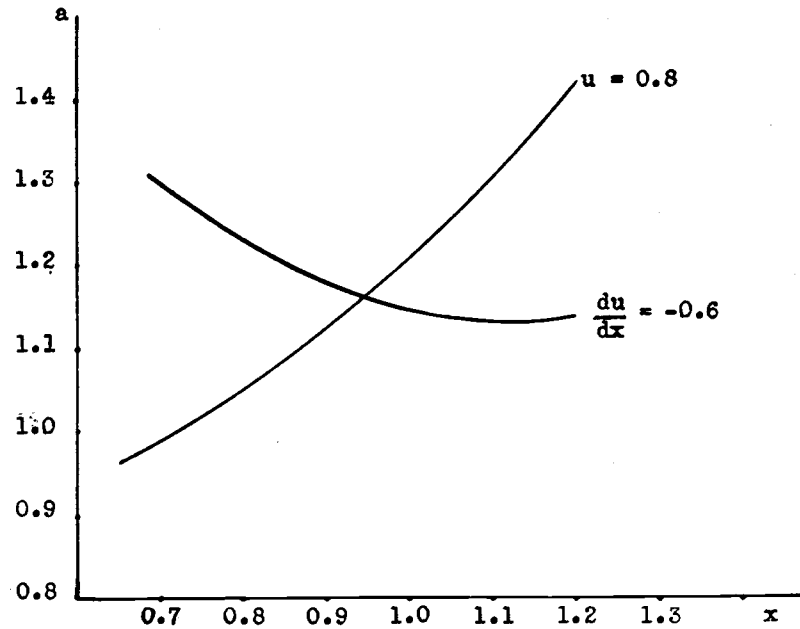


FIGURE 1

The coordinates of the point of intersection, which are of course the desired values of x and a , are seen to be approximately $x=0.945$, $a=1.165$. In carrying out the above work it is obviously desirable to do some preliminary scouting in Tables IV and XV to see where the values of x should be chosen so that a small number of points will locate the intersection. It is not really necessary to take as many as were taken in the example above.

If we are not much concerned with accuracy in the third decimal place, the values already obtained may be regarded as satisfactory and we need go no farther. If we desire greater accuracy we may proceed as follows:

Second Step. Direct check of first approximation. We now calculate the values of u and du/dx corresponding to $x=0.945$, $a=1.165$, that is, corresponding to the values given by the first approximation. The discrepancy between the values of u and du/dx thus found and the desired values $u=0.8$, $du/dx=0.6$ will serve to indicate the error of the first approximation. The calculation is performed by means of (4), and appears as follows:

From Table IV

	$a=1.1$	$a=1.2$	$a=1.3$
$x=.9$	.7822	.8547	.9275
$x=1.0$	.7253	.7931	
$x=1.1$	.6673		

whence by (4)

$$\begin{aligned}
 u = & .7822 \times 1 \\
 & - .0569 \times .45 \\
 & + .0725 \times .65 \\
 & - .0011 \times -.123 \\
 & - .0047 \times .293 \\
 & + .0003 \times -.113
 \end{aligned}$$

and $u=0.8024$.

From Table XV

	$a=1.1$	$a=1.2$	$a=1.3$
$x=.9$	.5622	.6087	.6546
$x=1.0$	.5758	.6228	
$x=1.1$	.5823		

whence by (4)

$$-\frac{du}{dx} = \begin{array}{r} .5622 \times 1 \\ +.0136 \times .45 \\ +.0465 \times .65 \\ -.0071 \times -.123 \\ +.0005 \times .293 \\ -.0006 \times -.113 \end{array}$$

and $du/dx = -.5996$. Thus the values $x=0.945$, $a=1.165$ give $u=0.8024$, $du/dx = -.5996$ instead of $u=0.8000$ and $du/dx = -.6000$, as desired.

Third Step. The second approximation. We now use the first three terms only of formula (2), taking $x_0 = 0.945$, $a_1 = 1.165$, $u_0 = 0.8024$, $-(du/dx)_0 = 0.5996$, $u=0.8$, $-du/dx=0.6$, regarding x and a as unknowns to be determined. For the differences $u_{10}-u_{00}$, etc., we use the same values as in the second step. In this manner we obtain the two simultaneous equations

$$\begin{aligned} 0.8 &= 0.8024 - .0569 \left(\frac{x-0.945}{0.1} \right) + .0725 \left(\frac{a-1.165}{0.1} \right), \\ 0.6 &= 0.5996 - .0136 \left(\frac{x-0.945}{0.1} \right) + .0465 \left(\frac{a-1.165}{0.1} \right), \end{aligned}$$

or

$$\begin{aligned} 569X - 725A &= 24, \\ 136X + 465A &= 4, \end{aligned}$$

where $X = \frac{x-0.945}{0.1}$, $A = \frac{a-1.165}{0.1}$. Solving for X and A we obtain

$$X = 0.387, \quad A = -0.0027.$$

Then

$$\begin{aligned} x &= 0.945 + 0.1X = 0.94887, \\ a &= 1.165 + 0.1A = 1.16473. \end{aligned}$$

Inasmuch as the figures in the fifth decimal place are unreliable, owing to the fact that the tables themselves are good to four places only, we take as the final solution of the problem

$$\begin{aligned} x &= 0.9489, \\ a &= 1.1647. \end{aligned}$$

To show how the work may be systematically and compactly arranged we present a second example, omitting the detailed explanations.

EXAMPLE 3. Given $b = 0.6$, $u = 1.00$, $du/dx = -0.7$; to find a and x :

From Table IV

$x =$	1.0	1.1	1.2	1.3
$a =$	1.436	1.530	1.634	1.750

From Table XV

$x =$	1.0	1.1	1.2	1.3
$a =$	1.605	1.605	1.622	1.654

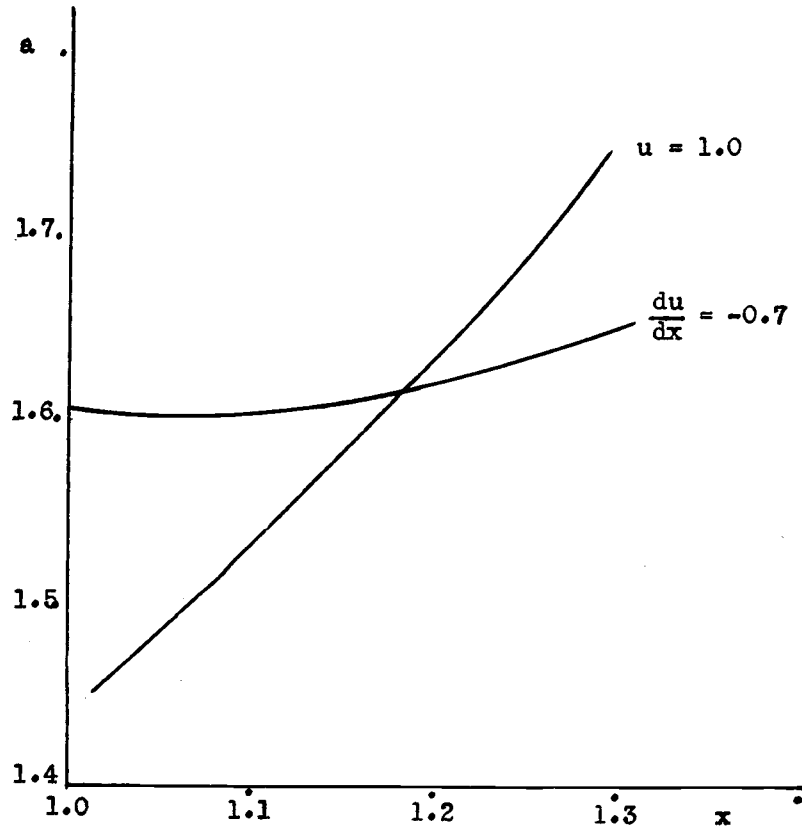


FIGURE 2

From the graph $a=1.620$, $x=1.187$.

From Table IV

	$a=1.6$	$a=1.7$	$a=1.8$
$x=1.1$	1.0474	1.1153	1.1835
$x=1.2$	.9778	1.0420	
$x=1.3$	.9092		

From (4) for $x=1.187$, $a=1.620$, we have

$$u = 1.0474 - (.0696)(.87) + (.0679)(.20) + (.0010)(-.056) \\ - (.0037)(.174) + (.0003)(-.08) = 0.99970.$$

From Table XV

	$a=1.6$	$a=1.7$	$a=1.8$
$x=1.1$	.6989	.7364	.7742
$x=1.2$	.6918	.7294	
$x=1.3$	.6802		

From (4) for $x=1.187$, $a=1.620$, we have

$$du/dx = .6989 - (.0071)(.87) + (.0375)(.20) - (.0045)(-.056) \\ + (.0001)(.174) + (.0003)(-.08) = .70047.$$

Then

$$\begin{aligned} -696X + 679A &= 3.0, \\ -71X + 375A &= -4.7, \end{aligned}$$

whence $X = -.0203$, $A = -.0164$, and $x = 1.1850$, $a = 1.6184$.

Checking these values in (4) we get

$$\begin{aligned} u &= 1.00001, \\ \frac{du}{dx} &= -.70001. \end{aligned}$$

The inverse interpolation in Tables V and XVI is quite similar, but it must be remembered that the values of x start at the point of inflection and that the value of u given at the head of each column is u_0 , the ordinate at the point of inflection. Thus u_0 plays the same role in Tables V and XVI as a does in Tables IV and XV.

EXAMPLE 4. Given $b=0.7$, $u=0.03$, $du/dx = -0.17$ to find u_0 and x :
From Table V

$u_0 = .2$	$.3$	$.4$	$.5$	$.6$
$x = 1.423$	1.497	1.493	1.449	1.377

Note that we select values of u_0 and interpolate to find x which gives us $u=0.03$. This is done because here the value of x is changing much more slowly than the value of u_0 .

From Table XVI

$x = 1.3$	1.4	1.5
$u_0 = 0.406$	0.446	0.498

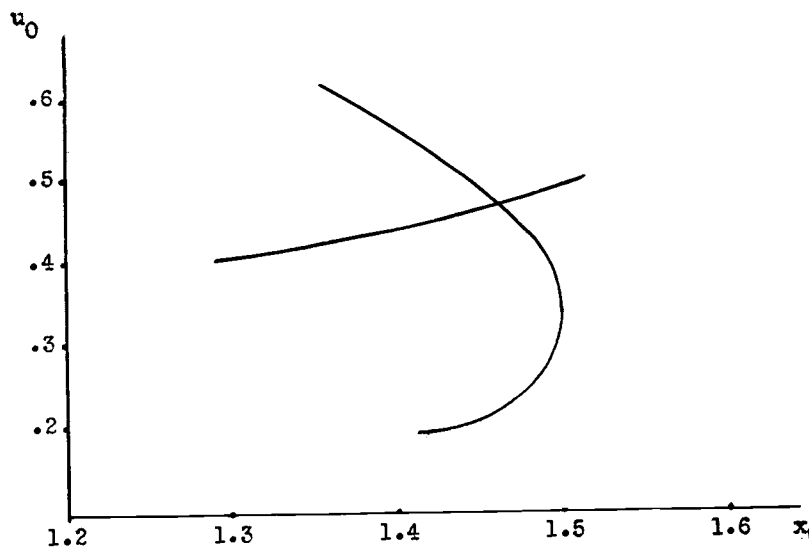


FIGURE 3

From the figure we have $x=1.463, u_0=0.475$.

From Table V

	$u=.4$	$u=.5$	$u=.6$
$x=1.4$	.0434	.0389	.0244
$x=1.5$	.0290	.0208	
$x=1.6$	.0162		

From (4) for $x=1.463, u=0.475$, we have

$$\begin{aligned} u &= .0434 + (-.0144)(.63) + (-.0045)(.75) + (.0016)(-.116) \\ &\quad + (-.0037)(.473) + (.0100)(-.093) \\ &= 0.02995. \end{aligned}$$

From Table XVI

	$u=.4$	$u=.5$	$u=.6$
$x=1.4$	.1515	.1913	.2319
$x=1.5$	.1361	.1706	
$x=1.6$	.1211		

From (4) for $x=1.463, u=0.475$, we have

$$\begin{aligned} -du/dx &= 0.1515 + (-.0154)(.63) + (.0398)(.75) + (.0004)(-.116) \\ &\quad + (-.0053)(.473) + (.0008)(-.093) \\ &= 0.16902. \end{aligned}$$

Then

$$\begin{aligned} +.0144 X + .0045 U &= -.00005, \\ +.0154 X - .0398 U &= -.00098. \end{aligned}$$

whence $X = -.0100, U = .0208$, and we have

$$\begin{aligned} x &= 1.4620, \\ u &= 0.4771. \end{aligned}$$

5. Table XVII. In order to provide a complete solution of the surge tank problem the additional Table XVII has been calculated. This table supplies values of u for the case not covered by Table V; namely, the case in which the level in the surge tank is falling from a maximum following an upward surge. The initial values of u chosen are the final values of u in Table IV, since Table XVII will always immediately follow Table IV in the construction of a curve showing water level plotted against time. The following examples are given to illustrate the use of the tables in tracing the course of the surges. In order not to divert the reader's attention from essential principles, the numbers have been chosen so as to avoid cumbersome interpolation rather than to represent actual engineering problems.

Let H = head at any time (measured from static level to level in surge tank, and positive when level in surge tank is below static level).

H_0 = initial head.

H_1 = final head (after oscillations subside).

$P = \frac{LA}{2gkF}$. (See introduction to Tables of Damped Vibrations.)

Then we have the following relationships:

(1) $b^2 = H_1/2P$.

(2) $u_0 = \frac{H_0 - H_1}{P}$, in case of decreased demand.

(3) $u_0 = \frac{H_1 - H_0}{P}$, in case of increased demand.

(4) $H = H_1 + Pu$, on rising surge. (u taken from Table IV.)

(5) $H = H_1 - Pu$, on falling surge. (u taken from Table V or XVII.)

Let us assume that in a problem to which the tables are to be applied we know both the initial level and the final level. It will now be shown how the complete course of the oscillations can be traced by means of the tables.

EXAMPLE 5. Given a surge tank installation such that $P=30.5$. Suppose $H_0=27.20$ ft., $H_1=9.75$ ft.; to determine the course of the oscillations.

From equation (1) we have $b^2 = \frac{9.75}{61}$, whence $b = 0.39975$. We may take

$b = 0.4$ with sufficient accuracy for our purpose.

From equation (2) we have $u_0 = \frac{27.2-9.75}{30.5} = .5721$. Entering Table VI

with $b=0.4$, $u_0=.5721$, we find $a=1.0005$. For simplicity let us take $a=1.0$.

We now turn to Table IV for $b=0.4$, $a=1.0$, and plot the value of H , using equation (4), as shown in Figure 4. The portion of the curve AB represents the rising surge, starting from the point of inflection A . Upon reaching the point B we continue the curve by the use of Table XVII, which we enter with the values $b=0.4$, $a=1.0$. The value of x in Table XVII is of course measured from E . Upon reaching the point C we return to Table IV, which we enter with the values $b=0.4$,

$CF=a=0.045$. The section CD is thus obtained from Table IV by interpolation. The time t corresponding to any point on the graph may be obtained from the formula

$$t = \sqrt{L\bar{F}/gA} \cdot x.$$

Figure 5 gives the graph of a similar problem with final level close to static level, showing that the surges are much intensified.

EXAMPLE 6. Let $P=40$, $H_0=0$, $H_1=20$ ft. Determine the motion.

Here we find

$$b^2 = \frac{20}{2.40} = \frac{1}{4}, \quad b = 0.5.$$

$$u = \frac{20}{40} = 0.5.$$

We therefore enter Table V with $b=0.5$, $u_0=0.5$ to plot the initial downward surge, which appears as AB in Figure 6. From B to C we use Table IV, and from C to D Table XVII just as in the previous examples.

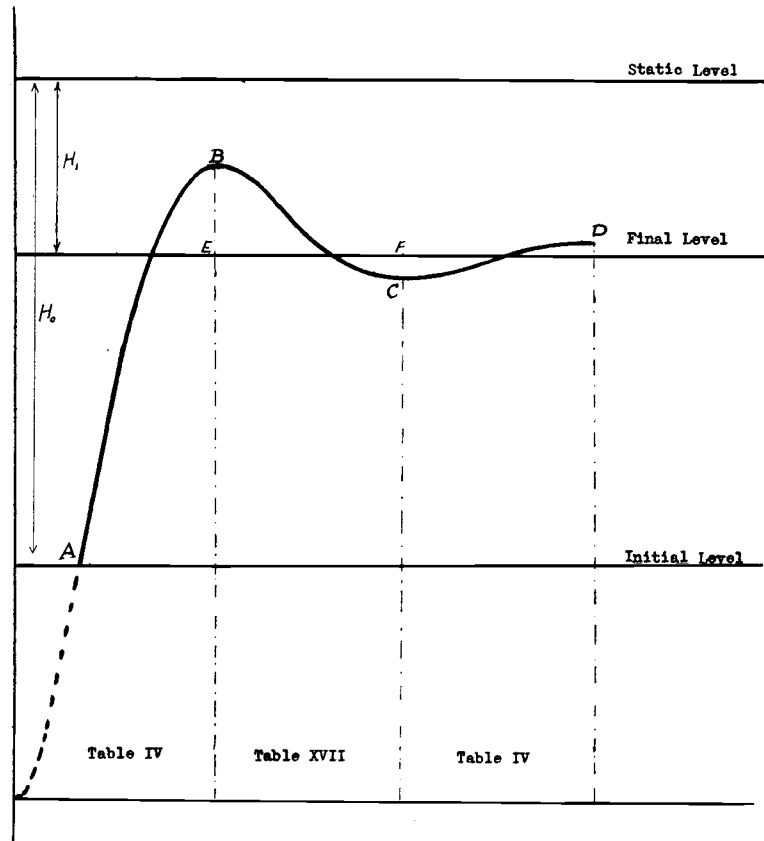


FIGURE 4

$P=30.5$, $H_0=27.20$ ft., $H_1=9.75$ ft.

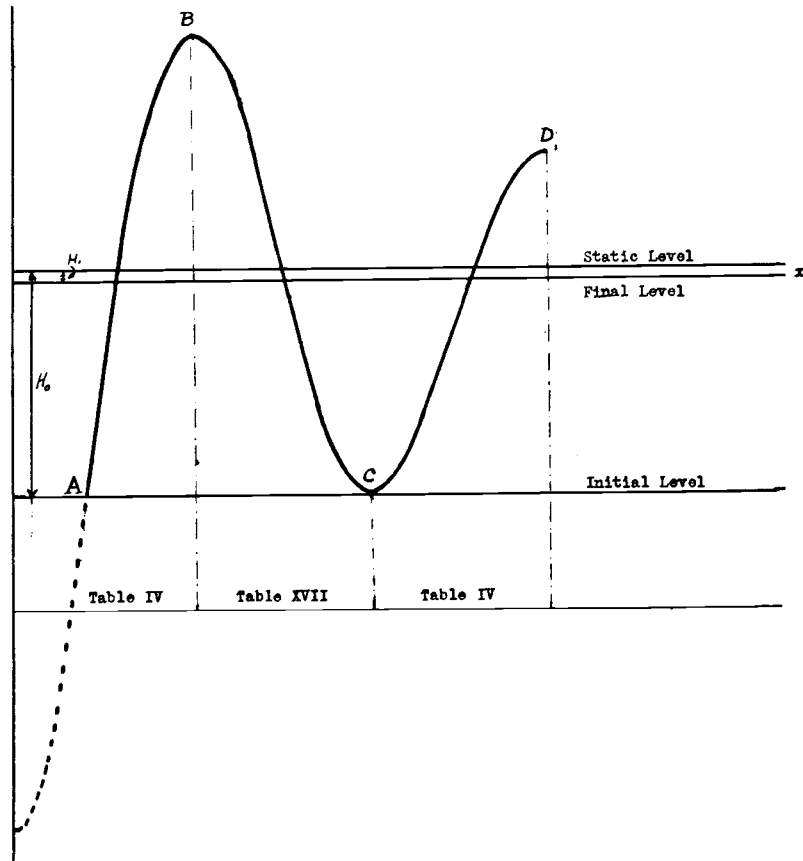


FIGURE 5
 $P=100, H_0=41 \text{ ft.}, H_1=2 \text{ ft.}$

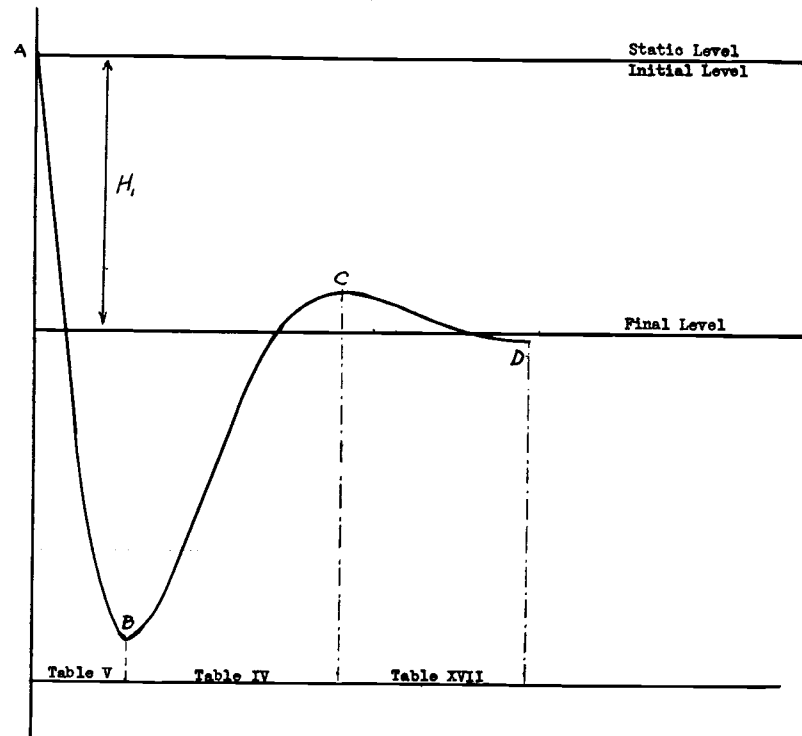


FIGURE 6
 $P=40, H_0=0, H_1=20$ ft.

TABLES

Table XV

$b=.1$		Values of $-du/dx$										$b=.1$
x	$a=.1$	$a=.2$	$a=.3$	$a=.4$	$a=.5$	$a=.6$	$a=.7$	$a=.8$	$a=.9$	$a=1.0$		
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000		
.1	.0099	.0198	.0296	.0395	.0494	.0593	.0691	.0790	.0888	.0987		
.2	.0196	.0389	.0583	.0777	.0971	.1164	.1357	.1550	.1743	.1935		
.3	.0286	.0572	.0857	.1141	.1424	.1706	.1988	.2269	.2548	.2828		
.4	.0373	.0745	.1114	.1482	.1848	.2212	.2574	.2935	.3294	.3650		
.5	.0454	.0906	.1353	.1797	.2238	.2675	.3110	.3541	.3969	.4393		
.6	.0529	.1053	.1571	.2083	.2590	.3092	.3588	.4080	.4566	.5047		
.7	.0597	.1185	.1765	.2337	.2901	.3457	.4006	.4547	.5081	.5608		
.8	.0657	.1302	.1935	.2557	.3169	.3769	.4360	.4941	.5512	.6075		
.9	.0709	.1402	.2080	.2743	.3392	.4028	.4651	.5261	.5859	.6446		
1.0	.0752	.1485	.2198	.2893	.3571	.4232	.4877	.5508	.6124	.6726		
1.1	.0787	.1550	.2290	.3008	.3705	.4383	.5042	.5684	.6309	.6919		
1.2	.0814	.1598	.2356	.3088	.3796	.4482	.5147	.5792	.6419	.7028		
1.3	.0831	.1629	.2396	.3133	.3845	.4531	.5195	.5837	.6459	.7061		
1.4	.0840	.1642	.2410	.3147	.3854	.4534	.5190	.5822	.6433	.7024		
1.5	.0840	.1639	.2401	.3128	.3825	.4493	.5135	.5752	.6348	.6923		
1.6	.0832	.1620	.2368	.3081	.3760	.4410	.5034	.5632	.6209	.6764		
1.7	.0816	.1586	.2314	.3005	.3663	.4290	.4891	.5467	.6021	.6554		
1.8	.0793	.1538	.2240	.2904	.3535	.4136	.4711	.5261	.5790	.6298		
1.9	.0762	.1475	.2146	.2780	.3380	.3951	.4497	.5019	.5520	.6003		
2.0	.0725	.1401	.2036	.2634	.3200	.3739	.4253	.4745	.5217	.5672		
2.1	.0681	.1315	.1909	.2469	.2998	.3501	.3982	.4442	.4885	.5311		
2.2	.0632	.1219	.1769	.2287	.2777	.3243	.3689	.4116	.4527	.4924		
2.3	.0578	.1115	.1617	.2090	.2539	.2966	.3375	.3769	.4149	.4516		
2.4	.0520	.1002	.1454	.1881	.2286	.2674	.3046	.3405	.3752	.4090		
2.5	.0458	.0883	.1283	.1661	.2022	.2368	.2703	.3027	.3342	.3649		
2.6	.0393	.0759	.1104	.1433	.1749	.2053	.2349	.2638	.2920	.3197		
2.7	.0325	.0630	.0920	.1199	.1468	.1730	.1988	.2240	.2490	.2737		
2.8	.0256	.0499	.0733	.0960	.1183	.1402	.1621	.1838	.2054	.2271		
2.9	.0186	.0366	.0543	.0719	.0894	.1071	.1251	.1432	.1616	.1803		
3.0	.0116	.0232	.0352	.0477	.0606	.0740	.0880	.1026	.1177	.1334		
3.1	.0046	.0099	.0163	.0236	.0318	.0410	.0512	.0622	.0741	.0867		
3.2	-.0023	-.0032	-.0025	-.0002	.0034	.0084	.0148	.0223	.0309	.0406		
3.3				-.0235	-.0244	-.0236	-.0211	-.0170	-.0116	-.0049		

Table XV

$b=.1$		Values of $-du/dx$										$b=.1$
x	$a=1.1$	$a=1.2$	$a=1.3$	$a=1.4$	$a=1.5$	$a=1.6$	$a=1.7$	$a=1.8$	$a=1.9$	$a=2.0$		
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000		
.1	.1085	.1184	.1282	.1381	.1479	.1577	.1676	.1774	.1872	.1970		
.2	.2127	.2319	.2511	.2702	.2893	.3084	.3275	.3465	.3655	.3845		
.3	.3106	.3384	.3660	.3936	.4212	.4486	.4760	.5033	.5305	.5577		
.4	.4005	.4360	.4712	.5062	.5410	.5757	.6102	.6446	.6788	.7129		
.5	.4815	.5234	.5649	.6062	.6471	.6878	.7282	.7683	.8082	.8478		
.6	.5524	.5996	.6464	.6926	.7385	.7839	.8288	.8734	.9175	.9612		
.7	.6130	.6643	.7150	.7651	.8146	.8635	.9118	.9595	1.0067	1.0533		
.8	.6628	.7173	.7709	.8237	.8757	.9269	.9774	1.0272	1.0762	1.1246		
.9	.7023	.7588	.8142	.8687	.9222	.9748	1.0265	1.0774	1.1274	1.1766		
1.0	.7316	.7892	.8457	.9010	.9551	1.0083	1.0604	1.1115	1.1617	1.2109		
1.1	.7513	.8093	.8660	.9213	.9755	1.0284	1.0803	1.1310	1.1807	1.2294		
1.2	.7621	.8198	.8760	.9308	.9843	1.0366	1.0876	1.1375	1.1863	1.2341		
1.3	.7647	.8215	.8768	.9305	.9829	1.0341	1.0839	1.1325	1.1801	1.2266		
1.4	.7597	.8152	.8691	.9215	.9724	1.0221	1.0704	1.1176	1.1637	1.2086		
1.5	.7479	.8018	.8540	.9047	.9539	1.0019	1.0485	1.0940	1.1385	1.1818		
1.6	.7301	.7820	.8323	.8810	.9284	.9745	1.0194	1.0631	1.1058	1.1474		
1.7	.7069	.7566	.8048	.8515	.8969	.9410	.9839	1.0258	1.0667	1.1066		
1.8	.6789	.7264	.7723	.8168	.8601	.9022	.9432	.9832	1.0223	1.0605		
1.9	.6468	.6918	.7355	.7777	.8189	.8589	.8979	.9361	.9733	1.0098		
2.0	.6111	.6536	.6949	.7349	.7738	.8118	.8489	.8851	.9206	.9564		
2.1	.5723	.6123	.6511	.6888	.7256	.7616	.7967	.8311	.8648	.8979		
2.2	.5309	.5683	.6047	.6401	.6747	.7086	.7418	.7744	.8064	.8379		
2.3	.4873	.5221	.5560	.5892	.6217	.6535	.6848	.7156	.7459	.7758		
2.4	.4419	.4741	.5056	.5365	.5668	.5967	.6261	.6551	.6838	.7121		
2.5	.3950	.4246	.4537	.4823	.5105	.5384	.5660	.5933	.6204	.6472		
2.6	.3470	.3740	.4007	.4271	.4532	.4791	.5049	.5305	.5560	.5813		
2.7	.2982	.3226	.3469	.3710	.3951	.4191	.4431	.4671	.4910	.5148		
2.8	.2488	.2706	.2926	.3145	.3365	.3586	.3808	.4031	.4255	.4479		
2.9	.1992	.2185	.2380	.2577	.2777	.2978	.3184	.3391	.3599	.3809		
3.0	.1496	.1663	.1834	.2010	.2190	.2373	.2560	.2751	.2944	.3140		
3.1	.1002	.1143	.1291	.1445	.1605	.1770	.1939	.2113	.2291	.2473		
3.2	.0513	.0629	.0753	.0885	.1025	.1171	.1323	.1481	.1644	.1812		
3.3	.0030	.0121	.0222	.0333	.0452	.0579	.0714	.0856	.1004	.1157		
3.4		-.0377	-.0299	-.0210	-.0111	.0003	.0115	.0240	.0373	.0512		
3.5								-.0365	-.0247	-.0122		

Table XV

$b=.1$		Values of $-du/dx$									$b=.1$
x	$a=.2.1$	$a=.2.2$	$a=.2.3$	$a=.2.4$	$a=.2.5$	$a=.2.6$	$a=.2.7$	$a=.2.8$	$a=.2.9$	$a=.3.0$	
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	
.1	.2068	.2167	.2265	.2363	.2461	.2559	.2657	.2755	.2853	.2951	
.2	.4035	.4224	.4413	.4602	.4791	.4979	.5168	.5356	.5543	.5731	
.3	.5847	.6117	.6386	.6655	.6923	.7190	.7456	.7721	.7986	.8250	
.4	.7467	.7804	.8139	.8474	.8807	.9138	.9468	.9796	1.0122	1.0447	
.5	.8870	.9261	.9648	1.0033	1.0416	1.0796	1.1173	1.1548	1.1920	1.2290	
.6	1.0045	1.0475	1.0900	1.1322	1.1740	1.2154	1.2564	1.2971	1.3375	1.3775	
.7	1.0993	1.1449	1.1899	1.2344	1.2785	1.3220	1.3651	1.4077	1.4499	1.4916	
.8	1.1723	1.2193	1.2658	1.3116	1.3568	1.4014	1.4454	1.4889	1.5319	1.5743	
.9	1.2250	1.2726	1.3195	1.3657	1.4113	1.4561	1.5003	1.5439	1.5868	1.6292	
1.0	1.2593	1.3068	1.3535	1.3995	1.4446	1.4891	1.5328	1.5759	1.6183	1.6600	
1.1	1.2772	1.3241	1.3701	1.4153	1.4597	1.5033	1.5461	1.5883	1.6297	1.6705	
1.2	1.2808	1.3267	1.3716	1.4157	1.4589	1.5014	1.5431	1.5841	1.6244	1.6640	
1.3	1.2720	1.3166	1.3602	1.4030	1.4449	1.4861	1.5264	1.5661	1.6051	1.6434	
1.4	1.2526	1.2957	1.3379	1.3792	1.4197	1.4594	1.4984	1.5367	1.5743	1.6113	
1.5	1.2242	1.2657	1.3063	1.3461	1.3851	1.4234	1.4609	1.4979	1.5341	1.5693	
1.6	1.1882	1.2280	1.2670	1.3053	1.3428	1.3796	1.4158	1.4513	1.4862	1.5206	
1.7	1.1457	1.1839	1.2214	1.2581	1.2941	1.3295	1.3643	1.3985	1.4323	1.4658	
1.8	1.0978	1.1344	1.1703	1.2056	1.2402	1.2742	1.3076	1.3405	1.3729	1.4048	
1.9	1.0455	1.0805	1.1149	1.1487	1.1819	1.2145	1.2467	1.2784	1.3096	1.3404	
2.0	.9895	1.0230	1.0559	1.0882	1.1201	1.1505	1.1824	1.2129	1.2431	1.2728	
2.1	.9304	.9624	.9939	1.0249	1.0554	1.0856	1.1154	1.1448	1.1739	1.2026	
2.2	.8689	.8994	.9295	.9592	.9885	1.0175	1.0462	1.0745	1.1026	1.1303	
2.3	.8053	.8344	.8632	.8916	.9198	.9476	.9752	1.0026	1.0296	1.0565	
2.4	.7402	.7679	.7954	.8226	.8496	.8764	.9029	.9293	.9555	.9815	
2.5	.6738	.7002	.7264	.7525	.7784	.8041	.8297	.8551	.8804	.9055	
2.6	.6066	.6317	.6567	.6815	.7063	.7310	.7557	.7802	.8046	.8290	
2.7	.5387	.5625	.5863	.6101	.6338	.6575	.6812	.7049	.7285	.7520	
2.8	.4705	.4931	.5157	.5383	.5610	.5837	.6065	.6293	.6521	.6749	
2.9	.4021	.4234	.4449	.4665	.4881	.5099	.5318	.5537	.5757	.5978	
3.0	.3339	.3540	.3743	.3947	.4154	.4362	.4572	.4783	.4995	.5208	
3.1	.2659	.2848	.3039	.3233	.3430	.3628	.3829	.4032	.4236	.4442	
3.2	.1984	.2161	.2341	.2524	.2710	.2900	.3091	.3286	.3482	.3680	
3.3	.1317	.1481	.1649	.1821	.1998	.2177	.2360	.2546	.2735	.2925	
3.4	.0658	.0809	.0966	.1127	.1293	.1463	.1637	.1814	.1995	.2178	
3.5	.0010	.0148	.0293	.0444	.0599	.0759	.0924	.1092	.1264	.1439	
3.6	-.0626	-.0500	-.0367	-.0228	-.0083	-.0067	.0222	.0381	.0545	.0712	

Table XV

$b=.2$		Values of $-du/dx$									$b=.2$
x	$a=.1$	$a=.2$	$a=.3$	$a=.4$	$a=.5$	$a=.6$	$a=.7$	$a=.8$	$a=.9$	$a=1.0$	
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	
.1	.0098	.0196	.0293	.0391	.0489	.0587	.0684	.0782	.0880	.0977	
.2	.0191	.0381	.0572	.0762	.0952	.1141	.1331	.1520	.1709	.1897	
.3	.0273	.0555	.0832	.1108	.1383	.1657	.1931	.2203	.2475	.2746	
.4	.0359	.0716	.1072	.1426	.1778	.2128	.2477	.2824	.3170	.3514	
.5	.0433	.0863	.1289	.1713	.2133	.2551	.2966	.3377	.3786	.4192	
.6	.0499	.0994	.1483	.1968	.2447	.2922	.3393	.3859	.4320	.4777	
.7	.0558	.1109	.1652	.2189	.2718	.3241	.3757	.4266	.4770	.5271	
.8	.0609	.1207	.1796	.2375	.2945	.3506	.4057	.4601	.5136	.5663	
.9	.0651	.1289	.1914	.2527	.3128	.3718	.4296	.4864	.5421	.5969	
1.0	.0685	.1354	.2007	.2645	.3268	.3878	.4474	.5058	.5630	.6189	
1.1	.0711	.1403	.2075	.2730	.3368	.3989	.4595	.5187	.5765	.6330	
1.2	.0729	.1435	.2119	.2783	.3427	.4053	.4662	.5255	.5833	.6396	
1.3	.0739	.1451	.2140	.2805	.3450	.4074	.4679	.5268	.5839	.6395	
1.4	.0741	.1453	.2138	.2799	.3437	.4053	.4650	.5228	.5789	.6334	
1.5	.0736	.1440	.2117	.2767	.3392	.3996	.4579	.5143	.5688	.6218	
1.6	.0724	.1414	.2075	.2709	.3318	.3904	.4469	.5015	.5543	.6055	
1.7	.0705	.1376	.2017	.2630	.3217	.3782	.4326	.4851	.5358	.5850	
1.8	.0680	.1326	.1942	.2529	.3092	.3633	.4153	.4654	.5139	.5607	
1.9	.0650	.1266	.1852	.2411	.2946	.3459	.3953	.4429	.4889	.5334	
2.0	.0615	.1197	.1750	.2277	.2781	.3265	.3731	.4180	.4614	.5035	
2.1	.0576	.1120	.1636	.2129	.2600	.3053	.3489	.3910	.4318	.4713	
2.2	.0532	.1085	.1513	.1969	.2406	.2826	.3231	.3623	.4003	.4373	
2.3	.0485	.0945	.1382	.1799	.2200	.2586	.2960	.3323	.3675	.4018	
2.4	.0436	.0850	.1244	.1622	.1986	.2337	.2679	.3011	.3335	.3652	
2.5	.0384	.0751	.1101	.1438	.1764	.2081	.2390	.2692	.2987	.3278	
2.6	.0331	.0649	.0954	.1250	.1533	.1819	.2095	.2367	.2634	.2898	
2.7	.0277	.0545	.0805	.1059	.1309	.1555	.1798	.2039	.2278	.2516	
2.8	.0223	.0441	.0655	.0868	.1079	.1289	.1500	.1711	.1922	.2133	
2.9	.0168	.0337	.0506	.0677	.0850	.1025	.1203	.1384	.1567	.1753	
3.0	.0115	.0234	.0358	.0488	.0624	.0764	.0910	.1061	.1217	.1377	
3.1	.0062	.0133	.0214	.0303	.0401	.0508	.0622	.0744	.0872	.1007	
3.2	.0011	.0033	.0073	.0123	.0185	.0257	.0341	.0434	.0536	.0645	
3.3	-.0039	-.0060	-.0064	-.0052	-.0025	.0015	.0068	.0133	.0209	.0294	
3.4						-.0218	-.0194	-.0157	-.0107	-.0046	

Table XV

$b=2$		Values of $-du/dx$										$b=2$
x	$a=1.1$	$a=1.2$	$a=1.3$	$a=1.4$	$a=1.5$	$a=1.6$	$a=1.7$	$a=1.8$	$a=1.9$	$a=2.0$		
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	
.1	.1075	.1172	.1270	.1367	.1464	.1562	.1659	.1756	.1854	.1951		
.2	.2085	.2274	.2462	.2649	.2837	.3024	.3211	.3398	.3584	.3771		
.3	.3017	.3287	.3556	.3824	.4091	.4358	.4624	.4890	.5154	.5418		
.4	.3856	.4197	.4536	.4874	.5210	.5544	.5877	.6209	.6539	.6867		
.5	.4595	.4995	.5393	.5788	.6180	.6570	.6957	.7341	.7723	.8102		
.6	.5229	.5678	.6122	.6562	.6998	.7430	.7858	.8283	.8704	.9121		
.7	.5758	.6243	.6722	.7196	.7665	.8128	.8586	.9038	.9486	.9929		
.8	.6183	.6694	.7199	.7696	.8186	.8670	.9147	.9617	1.0081	1.0540		
.9	.6508	.7086	.7656	.8067	.8571	.9066	.9553	1.0032	1.0505	1.0970		
1.0	.6738	.7276	.7804	.8321	.8829	.9328	.9818	1.0300	1.0773	1.1239		
1.1	.6881	.7421	.7950	.8467	.8974	.9471	.9958	1.0436	1.0905	1.1365		
1.2	.6945	.7481	.8005	.8517	.9017	.9507	.9987	1.0457	1.0917	1.1369		
1.3	.6936	.7464	.7978	.8480	.8971	.9450	.9919	1.0377	1.0826	1.1266		
1.4	.6863	.7378	.7880	.8369	.8846	.9312	.9767	1.0212	1.0647	1.1074		
1.5	.6731	.7231	.7718	.8191	.8653	.9103	.9543	.9973	1.0394	1.0806		
1.6	.6550	.7032	.7501	.7957	.8402	.8835	.9259	.9673	1.0078	1.0474		
1.7	.6325	.6787	.7237	.7674	.8101	.8517	.8923	.9320	.9709	1.0090		
1.8	.6062	.6503	.6932	.7350	.7758	.8156	.8544	.8924	.9296	.9662		
1.9	.5766	.6185	.6594	.6992	.7380	.7759	.8130	.8493	.8849	.9198		
2.0	.5443	.5840	.6227	.6604	.6973	.7333	.7686	.8032	.8372	.8706		
2.1	.5097	.5471	.5836	.6193	.6542	.6884	.7219	.7548	.7872	.8190		
2.2	.4732	.5083	.5427	.5763	.6092	.6415	.6733	.7046	.7353	.7657		
2.3	.4353	.4681	.5002	.5317	.5628	.5933	.6233	.6529	.6821	.7110		
2.4	.3962	.4267	.4566	.4861	.5152	.5439	.5722	.6002	.6279	.6553		
2.5	.3563	.3845	.4123	.4397	.4669	.4938	.5204	.5468	.5730	.5990		
2.6	.3159	.3417	.3674	.3928	.4181	.4432	.4682	.4930	.5177	.5423		
2.7	.2752	.2988	.3223	.3457	.3692	.3925	.4158	.4391	.4624	.4856		
2.8	.2345	.2559	.2773	.2987	.3203	.3419	.3636	.3853	.4071	.4290		
2.9	.1941	.2132	.2325	.2520	.2717	.2916	.3117	.3319	.3523	.3728		
3.0	.1541	.1710	.1882	.2057	.2236	.2418	.2603	.2791	.2980	.3172		
3.1	.1148	.1294	.1446	.1602	.1763	.1929	.2097	.2270	.2446	.2624		
3.2	.0763	.0888	.1019	.1157	.1300	.1448	.1601	.1759	.1920	.2086		
3.3	.0389	.0492	.0603	.0722	.0847	.0979	.1116	.1259	.1407	.1559		
3.4	.0027	.0110	.0203	.0303	.0408	.0526	.0649	.0774	.0907	.1046		
3.5					-.0016	.0083	.0189	.0303	.0422	.0547		

Table XV

$b=2$		Values of $-du/dx$										$b=2$
x	$a=2.1$	$a=2.2$	$a=2.3$	$a=2.4$	$a=2.5$	$a=2.6$	$a=2.7$	$a=2.8$	$a=2.9$	$a=3.0$		
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	
.1	.2048	.2145	.2242	.2339	.2436	.2534	.2631	.2728	.2824	.2921		
.2	.3957	.4142	.4328	.4513	.4699	.4884	.5068	.5253	.5437	.5621		
.3	.5682	.5944	.6206	.6467	.6728	.6988	.7247	.7505	.7763	.8020		
.4	.7194	.7520	.7844	.8167	.8488	.8808	.9126	.9443	.9759	1.0073		
.5	.8479	.8854	.9226	.9595	.9962	1.0327	1.0690	1.1050	1.1408	1.1764		
.6	.9534	.9944	1.0350	1.0753	1.1153	1.1549	1.1942	1.2331	1.2718	1.3101		
.7	1.0367	1.0800	1.1229	1.1653	1.2072	1.2488	1.2899	1.3306	1.3709	1.4108		
.8	1.0992	1.1438	1.1879	1.2315	1.2745	1.3170	1.3590	1.4005	1.4415	1.4820		
.9	1.1428	1.1880	1.2325	1.2764	1.3197	1.3624	1.4045	1.4460	1.4870	1.5275		
1.0	1.1696	1.2147	1.2590	1.3026	1.3456	1.3879	1.4296	1.4707	1.5112	1.5511		
1.1	1.1818	1.2262	1.2699	1.3128	1.3550	1.3966	1.4375	1.4778	1.5175	1.5565		
1.2	1.1812	1.2246	1.2674	1.3093	1.3506	1.3911	1.4310	1.4702	1.5088	1.5468		
1.3	1.1698	1.2120	1.2536	1.2943	1.3344	1.3738	1.4124	1.4505	1.4879	1.5248		
1.4	1.1492	1.1901	1.2303	1.2698	1.3086	1.3467	1.3841	1.4209	1.4571	1.4928		
1.5	1.1209	1.1604	1.1992	1.2373	1.2748	1.3115	1.3477	1.3832	1.4182	1.4526		
1.6	1.0862	1.1243	1.1617	1.1984	1.2345	1.2699	1.3047	1.3390	1.3728	1.4061		
1.7	1.0463	1.0828	1.1188	1.1541	1.1888	1.2230	1.2565	1.2896	1.3222	1.3543		
1.8	1.0019	1.0370	1.0715	1.1055	1.1389	1.1718	1.2041	1.2360	1.2674	1.2985		
1.9	.9540	.9877	1.0208	1.0534	1.0856	1.1172	1.1483	1.1791	1.2094	1.2394		
2.0	.9033	.9355	.9673	.9986	1.0295	1.0599	1.0899	1.1196	1.1489	1.1778		
2.1	.8503	.8811	.9116	.9416	.9713	1.0006	1.0295	1.0581	1.0864	1.1144		
2.2	.7956	.8250	.8542	.8830	.9115	.9396	.9675	.9951	1.0224	1.0495		
2.3	.7359	.7646	.7935	.8221	.8505	.8776	.9044	.9310	.9574	.9836		
2.4	.6824	.7093	.7359	.7624	.7887	.8147	.8405	.8662	.8917	.9170		
2.5	.6248	.6504	.6758	.7011	.7263	.7514	.7762	.8009	.8256	.8501		
2.6	.5668	.5911	.6154	.6396	.6638	.6878	.7116	.7355	.7593	.7830		
2.7	.5088	.5319	.5550	.5781	.6012	.6243	.6473	.6702	.6931	.7160		
2.8	.4509	.4728	.4948	.5168	.5389	.5610	.5831	.6052	.6273	.6494		
2.9	.3935	.4142	.4351	.4560	.4771	.4982	.5194	.5406	.5619	.5832		
3.0	.3366	.3562	.3759	.3959	.4159	.4360	.4563	.4766	.4971	.5176		
3.1	.2806	.2989	.3176	.3364	.3554	.3746	.3940	.4135	.4331	.4529		
3.2	.2255	.2427	.2602	.2780	.2960	.3142	.3327	.3513	.3701	.3891		
3.3	.1716	.1876	.2040	.2207	.2377	.2550	.2725	.2903	.3083	.3264		
3.4	.1189	.1338	.1490	.1647	.1807	.1970	.2136	.2305	.2477	.2649		
3.5	.0679	.0815	.0956	.1102	.1251	.1405	.1562	.1722	.1884	.2049		

Table XV

$b=.3$		Values of $-du/dx$										$b=.3$
x	$a=.1$	$a=.2$	$a=.3$	$a=.4$	$a=.5$	$a=.6$	$a=.7$	$a=.8$	$a=.9$	$a=1.0$		
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	
.1	.0097	.0194	.0291	.0387	.0484	.0581	.0678	.0774	.0871	.0967	.1064	
.2	.0187	.0374	.0561	.0747	.0933	.1119	.1305	.1490	.1676	.1861	.2047	
.3	.0270	.0539	.0808	.1076	.1343	.1610	.1875	.2140	.2405	.2668	.2932	
.4	.0345	.0689	.1032	.1372	.1711	.2049	.2385	.2719	.3052	.3384	.3715	
.5	.0413	.0823	.1230	.1634	.2036	.2434	.2830	.3224	.3615	.4003	.4389	
.6	.0472	.0939	.1402	.1861	.2315	.2765	.3211	.3653	.4091	.4525	.4955	
.7	.0523	.1039	.1549	.2058	.2551	.3042	.3528	.4008	.4483	.4952	.5417	
.8	.0566	.1122	.1670	.2210	.2742	.3266	.3782	.4292	.4794	.5288	.5767	
.9	.0610	.1189	.1767	.2334	.2891	.3439	.3971	.4506	.5027	.5539	.6043	
1.0	.0626	.1239	.1839	.2426	.3000	.3564	.4116	.4657	.5188	.5710	.6223	
1.1	.0645	.1274	.1888	.2486	.3071	.3643	.4202	.4748	.5284	.5810	.6327	
1.2	.0656	.1294	.1916	.2519	.3107	.3680	.4240	.4786	.5319	.5840	.6350	
1.3	.0661	.1301	.1921	.2524	.3109	.3679	.4233	.4774	.5301	.5814	.6325	
1.4	.0658	.1294	.1909	.2505	.3082	.3643	.4188	.4718	.5233	.5736	.6239	
1.5	.0649	.1275	.1879	.2463	.3028	.3575	.4106	.4623	.5124	.5612	.6100	
1.6	.0635	.1246	.1834	.2401	.2949	.3480	.3994	.4493	.4978	.5449	.5917	
1.7	.0615	.1206	.1774	.2321	.2849	.3360	.3854	.4334	.4800	.5253	.5705	
1.8	.0591	.1158	.1702	.2225	.2731	.3219	.3691	.4150	.4595	.5027	.5457	
1.9	.0563	.1101	.1618	.2116	.2596	.3059	.3508	.3943	.4366	.4778	.5189	
2.0	.0531	.1038	.1526	.1994	.2447	.2884	.3308	.3719	.4119	.4508	.4887	
2.1	.0495	.0970	.1425	.1863	.2287	.2697	.3094	.3480	.3856	.4223	.4589	
2.2	.0458	.0896	.1318	.1724	.2117	.2499	.2869	.3230	.3582	.3925	.4259	
2.3	.0418	.0819	.1205	.1579	.1941	.2293	.2636	.2971	.3298	.3619	.3935	
2.4	.0376	.0739	.1089	.1429	.1759	.2082	.2397	.2705	.3008	.3305	.3597	
2.5	.0334	.0657	.0970	.1276	.1574	.1867	.2154	.2436	.2714	.2989	.3261	
2.6	.0291	.0574	.0850	.1121	.1388	.1650	.1909	.2165	.2419	.2670	.2918	
2.7	.0247	.0490	.0730	.0966	.1201	.1434	.1665	.1895	.2125	.2353	.2579	
2.8	.0204	.0408	.0610	.0813	.1016	.1219	.1422	.1627	.1833	.2038	.2241	
2.9	.0162	.0326	.0492	.0661	.0833	.1007	.1184	.1363	.1545	.1729	.1914	
3.0	.0120	.0246	.0377	.0513	.0654	.0800	.0950	.1105	.1263	.1425	.1588	
3.1	.0080	.0169	.0265	.0369	.0481	.0599	.0723	.0854	.0991	.1133	.1280	
3.2	.0042	.0095	.0158	.0231	.0314	.0405	.0504	.0611	.0724	.0844	.0970	
3.3	.0005	.0024	.0055	.0099	.0154	.0219	.0294	.0378	.0469	.0566	.0669	
3.4	-.0030	-.0043	-.0042	-.0027	.0002	.0042	.0073	.0155	.0226	.0306	.0395	
3.5					-.0141	-.0125	-.0096	-.0056	-.0005	.0056	.0125	

Table XV

$b=.3$		Values of $-du/dx$										$b=.3$
x	$a=.1$	$a=.2$	$a=.3$	$a=.4$	$a=.5$	$a=.6$	$a=.7$	$a=.8$	$a=.9$	$a=2.0$		
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	
.1	.1064	.1160	.1257	.1354	.1450	.1546	.1643	.1739	.1835	.1932	.2028	
.2	.2045	.2230	.2414	.2598	.2782	.2966	.3149	.3332	.3515	.3698	.3881	
.3	.2931	.3193	.3455	.3716	.3976	.4236	.4494	.4752	.5010	.5267	.5524	
.4	.3714	.4042	.4369	.4695	.5019	.5342	.5663	.5983	.6302	.6619	.6936	
.5	.4388	.4771	.5152	.5530	.5906	.6279	.6650	.7019	.7385	.7749	.8112	
.6	.4955	.5381	.5804	.6223	.6638	.7050	.7458	.7863	.8264	.8662	.9059	
.7	.5416	.5875	.6329	.6777	.7221	.7660	.8094	.8524	.8949	.9370	.9787	
.8	.5776	.6258	.6733	.7202	.7664	.8121	.8572	.9017	.9457	.9891	.1033	
.9	.6042	.6538	.7026	.7506	.7980	.8446	.8905	.9358	.9804	1.0244	1.0679	
1.0	.6221	.6724	.7218	.7702	.8179	.8648	.9110	.9564	1.0010	1.0450	1.0885	
1.1	.6321	.6824	.7318	.7805	.8277	.8743	.9201	.9651	1.0094	1.0529	1.0954	
1.2	.6350	.6848	.7337	.7815	.8284	.8743	.9194	.9637	1.0071	1.0498	1.0915	
1.3	.6316	.6806	.7285	.7754	.8213	.8663	.9103	.9535	.9959	1.0375	1.0782	
1.4	.6226	.6704	.7172	.7628	.8075	.8512	.8940	.9360	.9772	1.0176	1.0571	
1.5	.6088	.6552	.7005	.7447	.7880	.8303	.8717	.9123	.9521	.9912	1.0297	
1.6	.5909	.6356	.6793	.7219	.7636	.8044	.8444	.8835	.9219	.9595	1.0000	
1.7	.5694	.6123	.6543	.6952	.7352	.7744	.8128	.8504	.8873	.9236	.9591	
1.8	.5449	.5859	.6260	.6652	.7035	.7411	.7778	.8139	.8493	.8841	.9183	
1.9	.5179	.5570	.5952	.6325	.6691	.7050	.7401	.7746	.8085	.8419	.8747	
2.0	.4888	.5259	.5622	.5977	.6325	.6667	.7002	.7331	.7656	.7975	.8289	
2.1	.4582	.4932	.5275	.5612	.5942	.6267	.6586	.6900	.7209	.7514	.7815	
2.2	.4262	.4592	.4916	.5233	.5546	.5854	.6157	.6456	.6751	.7042	.7329	
2.3	.3933	.4243	.4547	.4846	.5141	.5432	.5719	.6003	.6284	.6561	.6835	
2.4	.3598	.3887	.4171	.4452	.4730	.5004	.5276	.5545	.5811	.6075	.6336	
2.5	.3260	.3528	.3793	.4055	.4315	.4574	.4830	.5084	.5337	.5588	.5837	
2.6	.2920	.3167	.3414	.3658	.3901	.4143	.4384	.4624	.4863	.5101	.5337	
2.7	.2581	.2808	.3036	.3262	.3489	.3715	.3941	.4166	.4392	.4617	.4841	
2.8	.2245	.2453	.2661	.2870	.3080	.3291	.3502	.3713	.3925	.4138	.4349	
2.9	.1915	.2103	.2293	.2484	.2678	.2873	.3069	.3267	.3466	.3666	.3865	
3.0	.1591	.1760	.1932	.2106	.2283	.2463	.2645	.2829	.3014	.3202	.3389	
3.1	.1275	.1425	.1579	.1737	.1898	.2063	.2230	.2400	.2573	.2748	.2923	
3.2	.0970	.1101	.1237	.1379	.1524	.1674	.1827	.1984	.2144	.2307	.2472	
3.3	.0675	.0788	.0908	.1032	.1162	.1297	.1436	.1580	.1727	.1878	.2031	
3.4	.0393	.0488	.0591	.0700	.0815	.0935	.1060	.1190	.1325	.1464	.1605	
3.5	.0125	.0203	.0289	.0382	.0482	.0588	.0699	.0816	.0938	.1065	.1196	
3.6		-.0067	.0001	.0079	.0165	.0257	.0355	.0459	.0569	.0684	.0804	
3.7					-.0134	-.0056	.0029	.0120	.0217	.0320	.0428	
3.8								-.0200	-.0115	-.0024	.0071	

Table XV

$b=.3$		Values of $-du/dx$										$b=.3$	
x	$a=2.1$	$a=2.2$	$a=2.3$	$a=2.4$	$a=2.5$	$a=2.6$	$a=2.7$	$a=2.8$	$a=2.9$	$a=3.0$			
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000		.0000	
.1	.2028	.2124	.2220	.2317	.2413	.2509	.2605	.2701	.2797	.2893		.2893	
.2	.3881	.4063	.4245	.4427	.4608	.4790	.4971	.5153	.5333	.5513		.5513	
.3	.5523	.5778	.6033	.6287	.6540	.6793	.7045	.7297	.7548	.7798		.7798	
.4	.6984	.7249	.7522	.7794	.8064	.8333	.8601	.8868	.9133	.9397		.9397	
.5	.8111	.8470	.8827	.9182	.9535	.9886	1.0234	1.0581	1.0926	1.1268		1.1268	
.6	.9057	.9448	.9837	1.0222	1.0604	1.0983	1.1359	1.1733	1.2103	1.2470		1.2470	
.7	.9787	1.0199	1.0608	1.1012	1.1412	1.1809	1.2201	1.2590	1.2975	1.3357		1.3357	
.8	1.0320	1.0744	1.1163	1.1578	1.1987	1.2392	1.2792	1.3188	1.3579	1.3966		1.3966	
.9	1.0678	1.1107	1.1529	1.1946	1.2358	1.2764	1.3165	1.3561	1.3953	1.4339		1.4339	
1.0	1.0883	1.1310	1.1731	1.2145	1.2553	1.2956	1.3354	1.3746	1.4133	1.4514		1.4514	
1.1	1.0956	1.1377	1.1792	1.2200	1.2602	1.2998	1.3388	1.3772	1.4152	1.4526		1.4526	
1.2	1.0917	1.1330	1.1735	1.2134	1.2527	1.2913	1.3294	1.3669	1.4039	1.4403		1.4403	
1.3	1.0784	1.1186	1.1580	1.1968	1.2350	1.2726	1.3096	1.3461	1.3820	1.4174		1.4174	
1.4	1.0572	1.0962	1.1344	1.1720	1.2091	1.2455	1.2813	1.3167	1.3515	1.3858		1.3858	
1.5	1.0295	1.0672	1.1041	1.1405	1.1763	1.2116	1.2462	1.2804	1.3141	1.3473		1.3473	
1.6	.9965	1.0328	1.0685	1.1036	1.1382	1.1732	1.2077	1.2417	1.2753	1.3084		1.3084	
1.7	.9591	.9941	1.0285	1.0623	1.0956	1.1285	1.1608	1.1927	1.2242	1.2552		1.2552	
1.8	.9183	.9519	.9850	1.0175	1.0497	1.0813	1.1125	1.1433	1.1737	1.2037		1.2037	
1.9	.8746	.9069	.9387	.9701	1.0010	1.0315	1.0616	1.0913	1.1207	1.1497		1.1497	
2.0	.8289	.8599	.8904	.9205	.9503	.9797	1.0087	1.0374	1.0658	1.0939		1.0939	
2.1	.7815	.8112	.8405	.8694	.8981	.9264	.9544	.9821	1.0095	1.0367		1.0367	
2.2	.7329	.7614	.7895	.8172	.8448	.8720	.8990	.9258	.9523	.9785		.9785	
2.3	.6836	.7107	.7377	.7643	.7908	.8170	.8430	.8688	.8944	.9198		.9198	
2.4	.6337	.6597	.6855	.7110	.7364	.7616	.7867	.8116	.8363	.8609		.8609	
2.5	.5837	.6085	.6331	.6576	.6820	.7062	.7303	.7543	.7782	.8019		.8019	
2.6	.5338	.5574	.5809	.6043	.6277	.6509	.6741	.6973	.7203	.7432		.7432	
2.7	.4841	.5066	.5290	.5514	.5738	.5961	.6183	.6406	.6628	.6849		.6849	
2.8	.4350	.4564	.4777	.4990	.5204	.5418	.5631	.5845	.6059	.6272		.6272	
2.9	.3866	.4068	.4270	.4474	.4678	.4882	.5087	.5292	.5497	.5703		.5703	
3.0	.3391	.3581	.3773	.3966	.4160	.4355	.4551	.4748	.4945	.5143		.5143	
3.1	.2926	.3105	.3286	.3469	.3653	.3839	.4026	.4214	.4403	.4593		.4593	
3.2	.2472	.2640	.2811	.2984	.3158	.3335	.3513	.3692	.3873	.4055		.4055	
3.3	.2032	.2189	.2349	.2511	.2676	.2843	.3012	.3183	.3356	.3530		.3530	
3.4	.1606	.1752	.1901	.2054	.2209	.2367	.2527	.2689	.2853	.3019		.3019	
3.5	.1196	.1331	.1470	.1612	.1757	.1905	.2056	.2210	.2366	.2523		.2523	
3.6	.0803	.0927	.1055	.1187	.1323	.1461	.1602	.1747	.1894	.2044		.2044	
3.7	.0428	.0541	.0658	.0780	.0905	.1034	.1167	.1302	.1441	.1582		.1582	
3.8	.0072	.0174	.0281	.0392	.0507	.0627	.0750	.0876	.1006	.1138		.1138	
3.9	-.0263	-.0172	-.0077	.0024	.0129	.0239	.0353	.0470	.0591	.0714		.0714	
4.0				-.0322			-.0023	.0084	.0195	.0311		.0311	

Table XV

$b=.4$		Values of $-du/dx$										$b=.4$	
x	$a=.1$	$a=.2$	$a=.3$	$a=.4$	$a=.5$	$a=.6$	$a=.7$	$a=.8$	$a=.9$	$a=1.0$			
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000			
.1	.0096	.0192	.0288	.0384	.0479	.0575	.0671	.0767	.0862	.0958			
.2	.0184	.0367	.0550	.0733	.0915	.1098	.1280	.1461	.1643	.1825			
.3	.0262	.0524	.0785	.1045	.1305	.1564	.1827	.2080	.2337	.2593			
.4	.0333	.0664	.0993	.1321	.1648	.1973	.2297	.2619	.2941	.3260			
.5	.0394	.0785	.1174	.1560	.1944	.2325	.2704	.3080	.3454	.3825			
.6	.0447	.0889	.1328	.1762	.2193	.2620	.3043	.3463	.3879	.4291			
.7	.0491	.0975	.1455	.1929	.2397	.2860	.3319	.3772	.4220	.4663			
.8	.0526	.1045	.1557	.2061	.2558	.3049	.3533	.4011	.4482	.4947			
.9	.0554	.1099	.1635	.2161	.2679	.3189	.3691	.4185	.4671	.5150			
1.0	.0575	.1138	.1690	.2231	.2763	.3284	.3797	.4300	.4794	.5280			
1.1	.0588	.1162	.1724	.2273	.2811	.3338	.3855	.4361	.4858	.5345			
1.2	.0594	.1173	.1738	.2290	.2828	.3355	.3870	.4374	.4868	.5351			
1.3	.0594	.1172	.1735	.2282	.2817	.3338	.3847	.4344	.4831	.5306			
1.4	.0589	.1160	.1715	.2254	.2780	.3292	.3791	.4278	.4753	.5218			
1.5	.0578	.1138	.1681	.2208	.2720	.3219	.3705	.4178	.4640	.5091			
1.6	.0563	.1107	.1634	.2145	.2641	.3123	.3593	.4051	.4497	.4933			
1.7	.0543	.1068	.1575	.2067	.2545	.3009	.3460	.3900	.4329	.4747			
1.8	.0520	.1022	.1507	.1978	.2434	.2877	.3309	.3729	.4139	.4539			
1.9	.0494	.0970	.1431	.1878	.2311	.2732	.3142	.3542	.3932	.4313			
2.0	.0465	.0914	.1348	.1769	.2178	.2576	.2964	.3342	.3711	.4072			
2.1	.0434	.0854	.1260	.1654	.2038	.2411	.2775	.3131	.3480	.3821			
2.2	.0401	.0790	.1167	.1534	.1891	.2239	.2580	.2914	.3241	.3562			
2.3	.0368	.0725	.1072	.1410	.1740	.2063	.2380	.2691	.2996	.3297			
2.4	.0333	.0658	.0974	.1283	.1587	.1884	.2177	.2465	.2749	.3029			
2.5	.0298	.0590	.0875	.1156	.1432	.1704	.1973	.2238	.2501	.2761			
2.6	.0263	.0530	.0777	.1029	.1278	.1525	.1770	.2013	.2254	.2494			
2.7	.0228	.0454	.0679	.0903	.1125	.1347	.1568	.1789	.2009	.2220			
2.8	.0194	.0388	.0583	.0779	.0975	.1172	.1371	.1569	.1769	.1970			
2.9	.0160	.0324	.0489	.0658	.0828	.1002	.1177	.1355	.1534	.1716			
3.0	.0128	.0261	.0398	.0540	.0686	.0836	.0990	.1146	.1306	.1470			
3.1	.0097	.0201	.0311	.0427	.0550	.0677	.0809	.0945	.1086	.1231			
3.2	.0067	.0144	.0228	.0320	.0419	.0524	.0635	.0752	.0875	.1002			
3.3	.0039	.0089	.0149	.0217	.0294	.0379	.0470	.0568	.0673	.0783			
3.4	.0013	.0039	.0075	.0121	.0177	.0242	.0314	.0394	.0481	.0575			
3.5	-.0011	-.0009	.0006	.0031	.0067	.0113	.0167	.0230	.0301	.0379			
3.6			-.0058	-.0052	-.0035	-.0007	.0030	.0077	.0132	.0195			
3.7							-.0096	-.0065	-.0025	.0023			
3.8										-.0136			

Table XV

$b=4$	Values of $-du/dx$										$b=4$
x	$a=1.1$	$a=1.2$	$a=1.3$	$a=1.4$	$a=1.5$	$a=1.6$	$a=1.7$	$a=1.8$	$a=1.9$	$a=2.0$	
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
.1	.1054	.1149	.1245	.1340	.1436	.1531	.1627	.1722	.1817	.1913	
.2	.2006	.2187	.2368	.2548	.2729	.2909	.3089	.3269	.3448	.3627	
.3	.2849	.3104	.3358	.3612	.3865	.4117	.4369	.4620	.4870	.5120	
.4	.3578	.3895	.4211	.4525	.4838	.5149	.5459	.5768	.6076	.6382	
.5	.4194	.4561	.4926	.5288	.5648	.6006	.6362	.6715	.7067	.7416	
.6	.4700	.5106	.5508	.5907	.6303	.6695	.7084	.7471	.7854	.8234	
.7	.5102	.5536	.5965	.6391	.6811	.7228	.7640	.8049	.8453	.8853	
.8	.5406	.5860	.6308	.6750	.7187	.7619	.8045	.8467	.8884	.9296	
.9	.5622	.6087	.6546	.6998	.7443	.7883	.8316	.8744	.9166	.9583	
1.0	.5758	.6228	.6691	.7147	.7594	.8035	.8470	.8898	.9320	.9736	
1.1	.5823	.6292	.6754	.7207	.7653	.8091	.8522	.8946	.9363	.9775	
1.2	.5825	.6289	.6745	.7193	.7632	.8063	.8487	.8904	.9314	.9718	
1.3	.5772	.6228	.6675	.7114	.7544	.7966	.8380	.8787	.9188	.9581	
1.4	.5672	.6117	.6553	.6980	.7398	.7809	.8212	.8608	.8996	.9379	
1.5	.5532	.5964	.6386	.6800	.7205	.7603	.7993	.8376	.8752	.9122	
1.6	.5358	.5775	.6182	.6581	.6972	.7356	.7732	.8102	.8465	.8823	
1.7	.5156	.5556	.5948	.6331	.6707	.7076	.7438	.7794	.8144	.8488	
1.8	.4930	.5313	.5688	.6055	.6416	.6770	.7118	.7459	.7795	.8126	
1.9	.4686	.5051	.5409	.5760	.6104	.6443	.6776	.7103	.7426	.7743	
2.0	.4426	.4773	.5114	.5448	.5777	.6100	.6418	.6731	.7040	.7345	
2.1	.4156	.4484	.4807	.5124	.5437	.5745	.6048	.6348	.6643	.6934	
2.2	.3877	.4187	.4492	.4793	.5089	.5382	.5671	.5956	.6238	.6517	
2.3	.3593	.3884	.4172	.4456	.4737	.5014	.5289	.5560	.5829	.6095	
2.4	.3306	.3579	.3849	.4117	.4382	.4644	.4904	.5162	.5418	.5672	
2.5	.3018	.3273	.3527	.3778	.4027	.4275	.4521	.4765	.5008	.5250	
2.6	.2732	.2969	.3205	.3440	.3674	.3907	.4140	.4371	.4601	.4831	
2.7	.2449	.2669	.2888	.3107	.3326	.3545	.3763	.3981	.4199	.4417	
2.8	.2171	.2373	.2576	.2780	.2984	.3188	.3393	.3598	.3804	.4010	
2.9	.1900	.2085	.2271	.2459	.2649	.2839	.3031	.3223	.3417	.3611	
3.0	.1635	.1804	.1974	.2147	.2322	.2499	.2678	.2858	.3039	.3222	
3.1	.1380	.1532	.1687	.1845	.2006	.2169	.2335	.2503	.2673	.2844	
3.2	.1134	.1270	.1410	.1554	.1700	.1851	.2004	.2159	.2318	.2478	
3.3	.0899	.1019	.1144	.1274	.1407	.1544	.1685	.1829	.1975	.2125	
3.4	.0675	.0781	.0891	.1007	.1127	.1251	.1380	.1511	.1647	.1785	
3.5	.0464	.0554	.0651	.0753	.0860	.0972	.1088	.1209	.1333	.1460	
3.6	.0265	.0341	.0424	.0513	.0608	.0707	.0812	.0921	.1034	.1151	
3.7	.0080	.0143	.0213	.0289	.0371	.0459	.0552	.0649	.0751	.0858	
3.8	-.0092	-.0042	.0015	.0079	.0149	.0225	.0307	.0394	.0485	.0581	
3.9					-.0057	.0008	.0079	.0155	.0236	.0321	
4.0										.0080	

Table XV

$b=.4$		Values of $-du/dx$										$b=.4$	
x	$a=2.1$	$a=2.2$	$a=2.3$	$a=2.4$	$a=2.5$	$a=2.6$	$a=2.7$	$a=2.8$	$a=2.9$	$a=3.0$			
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	
.1	.2008	.2104	.2199	.2294	.2389	.2484	.2579	.2674	.2769	.2864			
.2	.3806	.3985	.4164	.4342	.4521	.4699	.4876	.5054	.5231	.5409			
.3	.5369	.5618	.5866	.6113	.6360	.6606	.6851	.7096	.7340	.7584			
.4	.6687	.6991	.7294	.7595	.7895	.8194	.8491	.8788	.9083	.9377			
.5	.7763	.8108	.8452	.8793	.9132	.9469	.9804	1.0138	1.0469	1.0799			
.6	.8611	.8985	.9357	.9725	1.0091	1.0454	1.0814	1.1172	1.1527	1.1879			
.7	.9250	.9643	1.0032	1.0417	1.0799	1.1178	1.1553	1.1924	1.2293	1.2658			
.8	.9703	1.0106	1.0504	1.0898	1.1288	1.1674	1.2056	1.2434	1.2807	1.3177			
.9	.9994	1.0400	1.0801	1.1198	1.1589	1.1976	1.2358	1.2736	1.3110	1.3479			
1.0	1.0146	1.0550	1.0949	1.1343	1.1731	1.2115	1.2493	1.2867	1.3237	1.3601			
1.1	1.0180	1.0578	1.0972	1.1359	1.1742	1.2119	1.2491	1.2858	1.3220	1.3578			
1.2	1.0115	1.0505	1.0890	1.1270	1.1644	1.2012	1.2376	1.2734	1.3088	1.3437			
1.3	.9968	1.0349	1.0724	1.1093	1.1458	1.1816	1.2170	1.2519	1.2862	1.3202			
1.4	.9754	1.0124	1.0488	1.0847	1.1200	1.1548	1.1891	1.2230	1.2564	1.2893			
1.5	.9486	.9844	1.0197	1.0544	1.0886	1.1223	1.1555	1.1883	1.2207	1.2526			
1.6	.9174	.9520	.9860	1.0196	1.0527	1.0853	1.1174	1.1492	1.1805	1.2114			
1.7	.8827	.9160	.9489	.9812	1.0132	1.0447	1.0758	1.1065	1.1368	1.1667			
1.8	.8452	.8773	.9090	.9402	.9710	1.0014	1.0315	1.0611	1.0905	1.1194			
1.9	.8057	.8365	.8670	.8970	.9268	.9561	.9851	1.0138	1.0422	1.0702			
2.0	.7645	.7941	.8234	.8524	.8811	.9094	.9374	.9651	.9925	1.0197			
2.1	.7222	.7507	.7788	.8067	.8343	.8616	.8886	.9154	.9419	.9682			
2.2	.6793	.7065	.7336	.7604	.7869	.8132	.8393	.8651	.8907	.9162			
2.3	.6359	.6620	.6879	.7136	.7392	.7645	.7896	.8146	.8393	.8640			
2.4	.5924	.6174	.6422	.6669	.6914	.7158	.7400	.7641	.7880	.8118			
2.5	.5490	.5729	.5967	.6203	.6439	.6673	.6906	.7138	.7369	.7599			
2.6	.5060	.5287	.5515	.5741	.5967	.6192	.6416	.6640	.6862	.7085			
2.7	.4635	.4852	.5068	.5285	.5501	.5717	.5932	.6147	.6362	.6577			
2.8	.4216	.4423	.4629	.4836	.5043	.5249	.5456	.5663	.5870	.6076			
2.9	.3807	.4002	.4199	.4396	.4593	.4791	.4989	.5187	.5386	.5585			
3.0	.3407	.3592	.3778	.3966	.4154	.4343	.4532	.4722	.4913	.5104			
3.1	.3018	.3193	.3369	.3547	.3725	.3905	.4086	.4268	.4451	.4634			
3.2	.2641	.2805	.2972	.3140	.3309	.3480	.3653	.3826	.4001	.4177			
3.3	.2277	.2431	.2588	.2746	.2906	.3069	.3232	.3398	.3564	.3732			
3.4	.1927	.2071	.2218	.2367	.2518	.2671	.2826	.2983	.3142	.3302			
3.5	.1591	.1726	.1863	.2002	.2144	.2288	.2435	.2584	.2734	.2886			
3.6	.1272	.1396	.1523	.1653	.1786	.1921	.2059	.2200	.2342	.2486			
3.7	.0968	.1082	.1199	.1320	.1444	.1571	.1700	.1832	.1966	.2102			
3.8	.0681	.0785	.0893	.1005	.1119	.1237	.1358	.1482	.1607	.1735			
3.9	.0412	.0506	.0604	.0707	.0812	.0921	.1034	.1149	.1266	.1386			
4.0					.0523					.1055			

Table XV

$b=.5$		Values of $-du/dx$									$b=.5$
x	$a=.1$	$a=.2$	$a=.3$	$a=.4$	$a=.5$	$a=.6$	$a=.7$	$a=.8$	$a=.9$	$a=1.0$	
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	
.1	.0095	.0190	.0285	.0380	.0475	.0570	.0664	.0759	.0854	.0949	
.2	.0180	.0360	.0539	.0718	.0898	.1077	.1255	.1434	.1612	.1790	
.3	.0255	.0509	.0763	.1016	.1268	.1520	.1771	.2022	.2272	.2521	
.4	.0320	.0639	.0957	.1273	.1588	.1901	.2214	.2525	.2834	.3143	
.5	.0376	.0750	.1121	.1490	.1857	.2222	.2584	.2944	.3302	.3658	
.6	.0423	.0842	.1258	.1670	.2079	.2485	.2887	.3286	.3682	.4074	
.7	.0461	.0917	.1363	.1815	.2256	.2693	.3126	.3554	.3978	.4397	
.8	.0491	.0976	.1454	.1926	.2392	.2852	.3306	.3755	.4198	.4636	
.9	.0513	.1019	.1516	.2006	.2489	.2964	.3433	.3895	.4351	.4800	
1.0	.0529	.1048	.1558	.2059	.2551	.3036	.3512	.3981	.4442	.4896	
1.1	.0537	.1064	.1580	.2086	.2582	.3070	.3548	.4018	.4480	.4934	
1.2	.0540	.1068	.1585	.2090	.2585	.3071	.3547	.4013	.4471	.4920	
1.3	.0537	.1062	.1574	.2075	.2564	.3043	.3512	.3971	.4421	.4863	
1.4	.0530	.1046	.1550	.2041	.2521	.2990	.3449	.3898	.4338	.4768	
1.5	.0518	.1023	.1513	.1992	.2459	.2916	.3362	.3798	.4224	.4642	
1.6	.0503	.0991	.1467	.1930	.2382	.2823	.3254	.3675	.4087	.4491	
1.7	.0484	.0954	.1411	.1857	.2291	.2715	.3129	.3534	.3930	.4317	
1.8	.0462	.0912	.1349	.1774	.2189	.2594	.2990	.3377	.3756	.4127	
1.9	.0439	.0865	.1280	.1684	.2078	.2463	.2840	.3209	.3570	.3924	
2.0	.0413	.0815	.1206	.1588	.1961	.2325	.2681	.3031	.3373	.3710	
2.1	.0386	.0763	.1129	.1488	.1838	.2180	.2517	.2847	.3170	.3489	
2.2	.0358	.0708	.1049	.1384	.1711	.2032	.2348	.2658	.2963	.3263	
2.3	.0330	.0652	.0968	.1278	.1583	.1882	.2176	.2466	.2752	.3035	
2.4	.0301	.0596	.0886	.1172	.1453	.1730	.2004	.2274	.2541	.2806	
2.5	.0272	.0540	.0804	.1066	.1324	.1579	.1832	.2083	.2331	.2578	
2.6	.0243	.0484	.0723	.0960	.1196	.1430	.1662	.1894	.2124	.2354	
2.7	.0215	.0429	.0643	.0857	.1070	.1283	.1495	.1708	.1920	.2133	
2.8	.0188	.0376	.0566	.0756	.0948	.1140	.1333	.1527	.1721	.1917	
2.9	.0161	.0324	.0490	.0658	.0829	.1001	.1175	.1351	.1528	.1707	
3.0	.0135	.0275	.0418	.0564	.0714	.0867	.1022	.1181	.1341	.1505	
3.1	.0111	.0227	.0348	.0474	.0605	.0738	.0876	.1018	.1162	.1310	
3.2	.0088	.0182	.0283	.0389	.0500	.0616	.0737	.0862	.0991	.1124	
3.3	.0066	.0140	.0221	.0308	.0401	.0500	.0605	.0714	.0828	.0947	
3.4	.0046	.0100	.0162	.0232	.0309	.0391	.0480	.0575	.0674	.0779	
3.5	.0027	.0063	.0108	.0161	.0222	.0289	.0364	.0444	.0529	.0621	
3.6	.0009	.0029	.0059	.0096	.0142	.0195	.0255	.0321	.0394	.0473	
3.7	-.0006	-.0002	.0013	.0036	.0068	.0107	.0154	.0208	.0268	.0335	
3.8			-.0029	-.0019	.0000	.0027	.0062	.0104	.0152	.0207	
3.9					-.0061	-.0045	-.0022	.0009	.0046	.0090	
4.0							-.0078	-.0051	-.0016		

Table XV

$b=.5$		Values of $-du/dx$									$b=.5$	
x	$a=1.1$	$a=1.2$	$a=1.3$	$a=1.4$	$a=1.5$	$a=1.6$	$a=1.7$	$a=1.8$	$a=1.9$	$a=2.0$		
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000		.0000
.1	.1043	.1138	.1233	.1327	.1422	.1516	.1611	.1705	.1800	.1894		.1894
.2	.1968	.2145	.2323	.2500	.2677	.2854	.3030	.3206	.3383	.3559		.3559
.3	.2770	.3018	.3265	.3512	.3758	.4003	.4248	.4493	.4736	.4980		.4980
.4	.3450	.3755	.4060	.4363	.4665	.4966	.5265	.5564	.5861	.6157		.6157
.5	.4012	.4363	.4713	.5059	.5405	.5749	.6090	.6429	.6767	.7103		.7103
.6	.4463	.4849	.5233	.5613	.5990	.6365	.6736	.7105	.7471	.7834		.7834
.7	.4812	.5224	.5631	.6034	.6433	.6829	.7221	.7609	.7994	.8375		.8375
.8	.5069	.5496	.5919	.6337	.6750	.7159	.7563	.7962	.8358	.8749		.8749
.9	.5242	.5679	.6111	.6536	.6956	.7371	.7780	.8185	.8584	.8979		.8979
1.0	.5344	.5783	.6217	.6645	.7066	.7482	.7891	.8296	.8694	.9088		.9088
1.1	.5380	.5819	.6250	.6675	.7094	.7506	.7912	.8312	.8706	.9095		.9095
1.2	.5361	.5795	.6221	.6640	.7052	.7458	.7857	.8250	.8637	.9019		.9019
1.3	.5296	.5721	.6139	.6549	.6952	.7349	.7739	.8123	.8501	.8873		.8873
1.4	.5191	.5605	.6012	.6411	.6804	.7190	.7569	.7942	.8310	.8672		.8672
1.5	.5052	.5454	.5848	.6236	.6616	.6990	.7357	.7719	.8075	.8426		.8426
1.6	.4886	.5274	.5655	.6029	.6396	.6757	.7112	.7461	.7805	.8144		.8144
1.7	.4698	.5071	.5437	.5797	.6150	.6498	.6840	.7176	.7508	.7835		.7835
1.8	.4492	.4849	.5200	.5545	.5884	.6218	.6546	.6870	.7189	.7504		.7504
1.9	.4271	.4613	.4948	.5278	.5603	.5923	.6238	.6549	.6855	.7158		.7158
2.0	.4040	.4365	.4685	.5000	.5310	.5616	.5918	.6216	.6510	.6800		.6800
2.1	.3802	.4111	.4415	.4715	.5010	.5302	.5590	.5875	.6157	.6436		.6436
2.2	.3559	.3851	.4140	.4424	.4705	.4983	.5258	.5531	.5800	.6067		.6067
2.3	.3314	.3589	.3862	.4132	.4399	.4663	.4925	.5184	.5442	.5697		.5697
2.4	.3068	.3327	.3584	.3839	.4092	.4343	.4592	.4839	.5084	.5328		.5328
2.5	.2823	.3067	.3309	.3549	.3787	.4025	.4261	.4496	.4730	.4962		.4962
2.6	.2582	.2809	.3036	.3262	.3487	.3711	.3935	.4157	.4379	.4601		.4601
2.7	.2345	.2557	.2769	.2980	.3192	.3403	.3614	.3825	.4036	.4246		.4246
2.8	.2113	.2310	.2507	.2705	.2903	.3101	.3300	.3500	.3699	.3899		.3899
2.9	.1888	.2070	.2263	.2437	.2622	.2808	.2995	.3183	.3371	.3560		.3560
3.0	.1670	.1837	.2006	.2177	.2350	.2524	.2699	.2875	.3053	.3231		.3231
3.1	.1461	.1614	.1769	.1927	.2087	.2249	.2412	.2578	.2745	.2913		.2913
3.2	.1260	.1399	.1542	.1687	.1834	.1985	.2137	.2291	.2448	.2606		.2606
3.3	.1069	.1195	.1324	.1457	.1593	.1732	.1873	.2015	.2162	.2311		.2311
3.4	.0888	.1001	.1118	.1239	.1363	.1490	.1621	.1754	.1890	.2028		.2028
3.5	.0717	.0817	.0922	.1032	.1144	.1261	.1381	.1504	.1630	.1758		.1758
3.6	.0556	.0645	.0739	.0836	.0938	.1044	.1154	.1267	.1383	.1502		.1502
3.7	.0407	.0484	.0566	.0653	.0745	.0840	.0940	.1043	.1149	.1259		.1259
3.8	.0268	.0335	.0406	.0483	.0564	.0649	.0739	.0832	.0930	.1030		.1030
3.9	.0141	.0197	.0258	.0324	.0396	.0472	.0552	.0636	.0724	.0815		.0815
4.0	.0024	.0070	.0122	.0179	.0240	.0307	.0378	.0453	.0532	.0615		.0615
4.2					-.0032	.0017	.0071	.0129	.0191	.0257		.0257

Table XV

$b=.5$		Values of $-du/dx$									$b=.5$
x	$a=2.1$	$a=2.2$	$a=2.3$	$a=2.4$	$a=2.5$	$a=2.6$	$a=2.7$	$a=2.8$	$a=2.9$	$a=3.0$	
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	
.1	.1988	.2083	.2177	.2271	.2366	.2460	.2554	.2648	.2743	.2837	
.2	.3734	.3910	.4085	.4260	.4435	.4610	.4784	.4959	.5133	.5307	
.3	.5222	.5464	.5705	.5946	.6186	.6426	.6665	.6903	.7141	.7378	
.4	.6452	.6745	.7038	.7329	.7619	.7908	.8196	.8483	.8769	.9053	
.5	.7436	.7768	.8098	.8425	.8751	.9076	.9399	.9719	1.0039	1.0356	
.6	.8195	.8553	.8908	.9261	.9611	.9959	1.0304	1.0647	1.0988	1.1325	
.7	.8753	.9127	.9498	.9866	1.0231	1.0592	1.0951	1.1306	1.1658	1.2008	
.8	.9136	.9519	.9898	1.0273	1.0645	1.1013	1.1376	1.1737	1.2094	1.2448	
.9	.9369	.9755	1.0136	1.0513	1.0886	1.1254	1.1618	1.1978	1.2335	1.2688	
1.0	.9476	.9860	1.0239	1.0613	1.0983	1.1348	1.1708	1.2065	1.2417	1.2766	
1.1	.9479	.9857	1.0230	1.0599	1.0962	1.1321	1.1676	1.2026	1.2372	1.2714	
1.2	.9394	.9765	1.0131	1.0491	1.0847	1.1198	1.1545	1.1887	1.2225	1.2559	
1.3	.9240	.9601	.9957	1.0309	1.0656	1.0998	1.1335	1.1669	1.1998	1.2323	
1.4	.9028	.9379	.9726	1.0067	1.0404	1.0736	1.1064	1.1388	1.1708	1.2024	
1.5	.8771	.9111	.9447	.9778	1.0104	1.0427	1.0745	1.1059	1.1369	1.1676	
1.6	.8478	.8807	.9131	.9452	.9768	1.0080	1.0388	1.0692	1.0993	1.1291	
1.7	.8157	.8474	.8788	.9097	.9403	.9705	1.0003	1.0298	1.0590	1.0878	
1.8	.7814	.8121	.8423	.8722	.9017	.9309	.9597	.9883	1.0165	1.0445	
1.9	.7456	.7751	.8043	.8331	.8616	.8898	.9177	.9453	.9726	.9997	
2.0	.7087	.7371	.7652	.7930	.8204	.8477	.8746	.9013	.9278	.9540	
2.1	.6711	.6984	.7254	.7522	.7787	.8049	.8310	.8568	.8824	.9077	
2.2	.6331	.6593	.6853	.7110	.7365	.7618	.7870	.8119	.8367	.8613	
2.3	.5950	.6201	.6451	.6698	.6944	.7188	.7430	.7671	.7911	.8148	
2.4	.5570	.5811	.6050	.6287	.6524	.6759	.6993	.7225	.7457	.7686	
2.5	.5193	.5424	.5653	.5881	.6108	.6334	.6559	.6784	.7007	.7229	
2.6	.4822	.5042	.5261	.5479	.5697	.5915	.6132	.6348	.6563	.6778	
2.7	.4456	.4666	.4876	.5085	.5294	.5503	.5711	.5919	.6127	.6334	
2.8	.4099	.4299	.4499	.4699	.4899	.5099	.5299	.5499	.5699	.5898	
2.9	.3750	.3940	.4130	.4321	.4513	.4704	.4896	.5088	.5280	.5472	
3.0	.3411	.3591	.3772	.3954	.4137	.4320	.4503	.4688	.4872	.5057	
3.1	.3082	.3253	.3425	.3598	.3772	.3946	.4122	.4298	.4475	.4652	
3.2	.2765	.2927	.3089	.3253	.3419	.3585	.3752	.3921	.4090	.4260	
3.3	.2461	.2612	.2766	.2921	.3078	.3236	.3395	.3556	.3717	.3880	
3.4	.2168	.2311	.2455	.2602	.2750	.2900	.3051	.3204	.3358	.3513	
3.5	.1889	.2023	.2158	.2295	.2435	.2577	.2720	.2865	.3012	.3159	
3.6	.1623	.1748	.1875	.2004	.2135	.2268	.2404	.2541	.2680	.2820	
3.7	.1371	.1487	.1605	.1726	.1849	.1974	.2101	.2231	.2362	.2495	
3.8	.1134	.1240	.1350	.1462	.1577	.1694	.1814	.1935	.2059	.2184	
3.9	.0910	.1008	.1110	.1214	.1320	.1430	.1541	.1655	.1771	.1889	
4.0	.0701	.0791	.0884	.0980	.1079	.1180	.1284	.1390	.1499	.1609	
4.2	.0327	.0401	.0477	.0551	.0640	.0726	.0815	.0906	.1000	.1096	
4.4	.0125	.0075	.0021	-.0037	-.0097	.0161	.0228	.0297	.0370	.0444	
4.6				-.0107	-.0053	.0004	.0063	.0126	.0191	.0259	

Table XV

$b=.6$		Values of $-du/dx$										$b=.6$	
x	$a=.1$	$a=.2$	$a=.3$	$a=.4$	$a=.5$	$a=.6$	$a=.7$	$a=.8$	$a=.9$	$a=1.0$			
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000			
.1	.0094	.0188	.0282	.0376	.0470	.0564	.0658	.0752	.0845	.0939			
.2	.0177	.0353	.0529	.0705	.0881	.1056	.1231	.1406	.1581	.1756			
.3	.0248	.0495	.0742	.0988	.1233	.1478	.1722	.1966	.2209	.2451			
.4	.0309	.0616	.0922	.1227	.1531	.1833	.2134	.2434	.2733	.3031			
.5	.0359	.0717	.1072	.1425	.1776	.2125	.2472	.2817	.3160	.3501			
.6	.0401	.0799	.1194	.1585	.1974	.2359	.2742	.3121	.3498	.3871			
.7	.0434	.0864	.1289	.1710	.2127	.2540	.2949	.3354	.3755	.4152			
.8	.0459	.0912	.1360	.1803	.2240	.2672	.3100	.3522	.3939	.4352			
.9	.0477	.0947	.1410	.1867	.2317	.2762	.3201	.3633	.4060	.4482			
1.0	.0488	.0968	.1440	.1905	.2363	.2814	.3258	.3695	.4126	.4551			
1.1	.0493	.0978	.1453	.1921	.2380	.2832	.3277	.3714	.4144	.4568			
1.2	.0493	.0977	.1451	.1918	.2373	.2822	.3262	.3695	.4121	.4540			
1.3	.0489	.0967	.1436	.1895	.2345	.2787	.3220	.3645	.4063	.4474			
1.4	.0480	.0949	.1409	.1858	.2299	.2731	.3154	.3569	.3977	.4377			
1.5	.0468	.0925	.1372	.1809	.2237	.2657	.3067	.3471	.3866	.4255			
1.6	.0453	.0895	.1327	.1750	.2163	.2568	.2965	.3354	.3736	.4111			
1.7	.0435	.0860	.1275	.1681	.2079	.2468	.2849	.3223	.3590	.3951			
1.8	.0416	.0821	.1218	.1606	.1986	.2358	.2723	.3081	.3433	.3778			
1.9	.0394	.0780	.1157	.1525	.1887	.2241	.2588	.2930	.3266	.3596			
2.0	.0372	.0736	.1092	.1441	.1783	.2118	.2448	.2773	.3092	.3406			
2.1	.0349	.0690	.1025	.1353	.1675	.1992	.2304	.2611	.2914	.3212			
2.2	.0325	.0643	.0956	.1264	.1566	.1864	.2158	.2447	.2733	.3016			
2.3	.0301	.0596	.0887	.1174	.1456	.1735	.2011	.2283	.2552	.2819			
2.4	.0276	.0549	.0818	.1084	.1347	.1606	.1864	.2119	.2372	.2623			
2.5	.0252	.0502	.0749	.0995	.1238	.1479	.1719	.1957	.2194	.2429			
2.6	.0229	.0456	.0682	.0907	.1131	.1354	.1576	.1798	.2018	.2238			
2.7	.0206	.0411	.0617	.0822	.1027	.1232	.1437	.1642	.1847	.2053			
2.8	.0183	.0368	.0553	.0739	.0926	.1114	.1302	.1491	.1681	.1872			
2.9	.0162	.0326	.0492	.0659	.0828	.0999	.1172	.1346	.1521	.1697			
3.0	.0141	.0286	.0433	.0583	.0735	.0890	.1046	.1205	.1366	.1529			
3.1	.0122	.0247	.0377	.0510	.0646	.0785	.0927	.1071	.1218	.1368			
3.2	.0103	.0211	.0324	.0440	.0561	.0685	.0813	.0943	.1077	.1214			
3.3	.0086	.0177	.0274	.0375	.0481	.0591	.0705	.0822	.0943	.1068			
3.4	.0070	.0146	.0227	.0314	.0406	.0502	.0603	.0708	.0817	.0929			
3.5	.0056	.0116	.0184	.0257	.0336	.0420	.0508	.0601	.0698	.0799			
3.6	.0041	.0089	.0144	.0204	.0271	.0342	.0419	.0501	.0587	.0677			
3.7	.0028	.0064	.0107	.0155	.0210	.0271	.0337	.0408	.0483	.0563			
3.8	.0017	.0041	.0073	.0111	.0155	.0205	.0261	.0322	.0387	.0458			
3.9	.0007	.0021	.0042	.0070	.0105	.0145	.0191	.0243	.0299	.0360			
4.0	-.0003	.0002	.0015	.0034	.0059	.0090	.0128	.0170	.0218	.0270			
4.2	-.0018	-.0028	-.0032	-.0028	-.0018	-.0003	.0019	.0046	.0077	.0114			
4.4										-.0012			

Table XV

x	Values of $-du/dx$									
	$a=1.1$	$a=1.2$	$a=1.3$	$a=1.4$	$a=1.5$	$a=1.6$	$a=1.7$	$a=1.8$	$a=1.9$	$a=2.0$
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
.1	.1033	.1127	.1221	.1314	.1408	.1501	.1595	.1689	.1782	.1876
.2	.1930	.2105	.2279	.2452	.2626	.2800	.2973	.3146	.3319	.3491
.3	.2693	.2934	.3175	.3415	.3655	.3894	.4132	.4370	.4607	.4844
.4	.3327	.3622	.3916	.4209	.4501	.4791	.5081	.5369	.5656	.5942
.5	.3840	.4177	.4512	.4845	.5177	.5506	.5834	.6160	.6484	.6807
.6	.4242	.4611	.4976	.5339	.5699	.6056	.6411	.6764	.7114	.7461
.7	.4546	.4935	.5322	.5705	.6084	.6460	.6833	.7203	.7569	.7932
.8	.4760	.5164	.5564	.5959	.6350	.6737	.7120	.7499	.7875	.8246
.9	.4899	.5310	.5716	.6117	.6514	.6905	.7293	.7676	.8054	.8428
1.0	.4970	.5383	.5791	.6193	.6590	.6982	.7369	.7751	.8128	.8501
1.1	.4985	.5396	.5801	.6200	.6593	.6982	.7364	.7742	.8115	.8483
1.2	.4952	.5357	.5756	.6149	.6536	.6918	.7294	.7665	.8031	.8392
1.3	.4878	.5275	.5666	.6050	.6429	.6802	.7170	.7532	.7889	.8241
1.4	.4771	.5158	.5538	.5912	.6281	.6644	.7002	.7354	.7701	.8044
1.5	.4636	.5011	.5380	.5743	.6101	.6453	.6799	.7141	.7477	.7810
1.6	.4480	.4842	.5198	.5549	.5894	.6234	.6569	.6900	.7225	.7547
1.7	.4306	.4654	.4997	.5335	.5668	.5995	.6319	.6637	.6951	.7262
1.8	.4118	.4453	.4782	.5106	.5426	.5741	.6052	.6359	.6662	.6961
1.9	.3921	.4240	.4556	.4866	.5173	.5476	.5774	.6069	.6360	.6648
2.0	.3716	.4021	.4322	.4619	.4913	.5202	.5489	.5772	.6052	.6329
2.1	.3506	.3797	.4084	.4367	.4647	.4925	.5199	.5470	.5739	.6005
2.2	.3295	.3570	.3843	.4113	.4380	.4645	.4907	.5166	.5424	.5679
2.3	.3082	.3344	.3602	.3859	.4113	.4365	.4615	.4863	.5110	.5354
2.4	.2871	.3118	.3363	.3606	.3848	.4087	.4326	.4563	.4798	.5032
2.5	.2663	.2895	.3126	.3356	.3585	.3813	.4040	.4266	.4490	.4714
2.6	.2458	.2676	.2894	.3111	.3328	.3544	.3759	.3974	.4188	.4401
2.7	.2258	.2462	.2667	.2872	.3076	.3281	.3485	.3689	.3892	.4096
2.8	.2063	.2254	.2446	.2639	.2831	.3024	.3217	.3411	.3604	.3798
2.9	.1875	.2053	.2232	.2413	.2594	.2775	.2958	.3141	.3324	.3508
3.0	.1693	.1859	.2026	.2195	.2364	.2535	.2707	.2880	.3053	.3227
3.1	.1519	.1673	.1828	.1985	.2144	.2304	.2465	.2627	.2792	.2957
3.2	.1353	.1494	.1638	.1784	.1932	.2082	.2233	.2386	.2540	.2696
3.3	.1195	.1325	.1458	.1593	.1730	.1869	.2011	.2154	.2299	.2446
3.4	.1045	.1164	.1286	.1410	.1538	.1667	.1799	.1933	.2069	.2207
3.5	.0904	.1012	.1124	.1238	.1355	.1475	.1598	.1723	.1850	.1979
3.6	.0771	.0869	.0971	.1075	.1183	.1294	.1407	.1523	.1641	.1762
3.7	.0648	.0736	.0827	.0923	.1021	.1123	.1227	.1334	.1444	.1557
3.8	.0532	.0611	.0694	.0780	.0869	.0962	.1058	.1157	.1259	.1363
3.9	.0426	.0495	.0569	.0647	.0728	.0812	.0900	.0991	.1084	.1180
4.0	.0327	.0389	.0454	.0523	.0596	.0673	.0752	.0835	.0921	.1009
4.2	.0156	.0201	.0251	.0305	.0363	.0424	.0489	.0557	.0628	.0702
4.4	.0016	.0048	.0084	.0124	.0168	.0215	.0266	.0321	.0378	.0438
4.6					-.0009	.0044	.0083	.0125	.0170	.0218
4.8						-.0092	-.0064	-.0033	.0000	.0037
5.0										-.0106

Table XV

x	Values of $-du/dx$									
	$a=2.1$	$a=2.2$	$a=2.3$	$a=2.4$	$a=2.5$	$a=2.6$	$a=2.7$	$a=2.8$	$a=2.9$	$a=3.0$
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
.1	.1969	.2062	.2156	.2249	.2343	.2436	.2529	.2623	.2716	.2809
.2	.3664	.3836	.4008	.4180	.4352	.4523	.4694	.4865	.5036	.5207
.3	.5080	.5315	.5550	.5785	.6019	.6252	.6485	.6717	.6949	.7180
.4	.6227	.6511	.6794	.7076	.7356	.7636	.7914	.8192	.8468	.8744
.5	.7127	.7446	.7763	.8079	.8393	.8705	.9015	.9324	.9631	.9937
.6	.7806	.8149	.8489	.8827	.9162	.9496	.9827	1.0156	1.0482	1.0807
.7	.8292	.8649	.9003	.9355	.9703	1.0048	1.0391	1.0731	1.1068	1.1403
.8	.8614	.8979	.9340	.9697	1.0051	1.0402	1.0749	1.1094	1.1435	1.1773
.9	.8799	.9165	.9527	.9886	1.0240	1.0591	1.0939	1.1283	1.1623	1.1961
1.0	.8869	.9233	.9593	.9948	1.0300	1.0648	1.0992	1.1332	1.1668	1.2002
1.1	.8846	.9205	.9559	.9909	1.0255	1.0597	1.0935	1.1270	1.1600	1.1928
1.2	.8748	.9099	.9447	.9789	1.0128	1.0463	1.0793	1.1120	1.1443	1.1763
1.3	.8589	.8932	.9271	.9605	.9935	1.0261	1.0584	1.0902	1.1217	1.1529
1.4	.8382	.8716	.9045	.9370	.9691	1.0008	1.0321	1.0631	1.0938	1.1241
1.5	.8137	.8461	.8780	.9096	.9407	.9715	1.0020	1.0320	1.0618	1.0912
1.6	.7864	.8177	.8486	.8792	.9094	.9392	.9687	.9979	1.0268	1.0554
1.7	.7568	.7871	.8170	.8465	.8758	.9047	.9333	.9616	.9896	1.0173
1.8	.7256	.7548	.7837	.8123	.8406	.8685	.8962	.9236	.9508	.9777
1.9	.6933	.7215	.7494	.7769	.8043	.8313	.8581	.8847	.9110	.9370
2.0	.6603	.6874	.7143	.7409	.7673	.7934	.8193	.8450	.8705	.8958
2.1	.6268	.6529	.6788	.7045	.7299	.7552	.7802	.8051	.8297	.8542
2.2	.5932	.6183	.6432	.6679	.6925	.7169	.7411	.7651	.7890	.8127
2.3	.5597	.5838	.6078	.6316	.6552	.6787	.7021	.7253	.7484	.7714
2.4	.5265	.5496	.5726	.5955	.6183	.6409	.6635	.6859	.7082	.7304
2.5	.4937	.5158	.5379	.5599	.5818	.6036	.6254	.6470	.6686	.6901
2.6	.4614	.4826	.5038	.5249	.5460	.5670	.5879	.6088	.6296	.6503
2.7	.4299	.4502	.4704	.4907	.5109	.5311	.5512	.5713	.5914	.6114
2.8	.3991	.4185	.4379	.4572	.4766	.4960	.5154	.5347	.5540	.5733
2.9	.3692	.3877	.4062	.4247	.4433	.4618	.4804	.4990	.5176	.5362
3.0	.3402	.3578	.3754	.3931	.4109	.4287	.4465	.4643	.4822	.5001
3.1	.3123	.3289	.3457	.3626	.3795	.3965	.4135	.4307	.4478	.4650
3.2	.2853	.3011	.3171	.3331	.3492	.3654	.3817	.3981	.4145	.4310
3.3	.2594	.2744	.2895	.3047	.3200	.3355	.3510	.3667	.3824	.3981
3.4	.2346	.2488	.2630	.2775	.2920	.3067	.3215	.3364	.3514	.3665
3.5	.2110	.2243	.2377	.2514	.2651	.2791	.2931	.3073	.3216	.3360
3.6	.1885	.2009	.2136	.2265	.2395	.2527	.2660	.2795	.2931	.3068
3.7	.1671	.1788	.1907	.2028	.2150	.2275	.2401	.2528	.2657	.2788
3.8	.1469	.1578	.1689	.1803	.1918	.2035	.2154	.2275	.2397	.2520
3.9	.1279	.1381	.1484	.1590	.1698	.1808	.1920	.2034	.2149	.2266
4.0	.1101	.1195	.1291	.1390	.1491	.1594	.1698	.1805	.1914	.2024
4.2	.0779	.0858	.0940	.1025	.1112	.1201	.1292	.1386	.1481	.1578
4.4	.0502	.0568	.0637	.0708	.0782	.0858	.0936	.1017	.1099	.1184
4.6	.0268	.0322	.0378	.0437	.0498	.0562	.0628	.0696	.0767	.0839
4.8	.0076	.0119	.0163	.0211	.0260	.0312	.0367	.0424	.0482	.0543

Table XV

$b=.7$		Values of $-du/dx$										$b=.7$	
x	$a=.1$	$a=.2$	$a=.3$	$a=.4$	$a=.5$	$a=.6$	$a=.7$	$a=.8$	$a=.9$	$a=1.0$			
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000			
.1	.0093	.0186	.0279	.0372	.0465	.0558	.0651	.0744	.0837	.0930			
.2	.0173	.0346	.0519	.0691	.0864	.1036	.1208	.1380	.1552	.1723			
.3	.0241	.0481	.0721	.0961	.1199	.1437	.1675	.1912	.2149	.2384			
.4	.0298	.0594	.0889	.1183	.1476	.1768	.2059	.2349	.2637	.2924			
.5	.0344	.0686	.1026	.1364	.1700	.2034	.2367	.2697	.3026	.3353			
.6	.0381	.0759	.1134	.1506	.1876	.2242	.2607	.2968	.3327	.3683			
.7	.0409	.0815	.1216	.1614	.2008	.2399	.2786	.3169	.3549	.3926			
.8	.0430	.0855	.1276	.1691	.2102	.2509	.2911	.3309	.3703	.4093			
.9	.0444	.0882	.1315	.1742	.2163	.2579	.2991	.3397	.3798	.4195			
1.0	.0452	.0897	.1336	.1769	.2195	.2615	.3030	.3439	.3843	.4242			
1.1	.0455	.0902	.1342	.1775	.2202	.2622	.3036	.3443	.3846	.4242			
1.2	.0453	.0898	.1335	.1765	.2187	.2603	.3012	.3415	.3812	.4203			
1.3	.0447	.0886	.1316	.1739	.2155	.2563	.2965	.3360	.3750	.4133			
1.4	.0438	.0867	.1288	.1701	.2107	.2506	.2898	.3283	.3663	.4036			
1.5	.0426	.0843	.1252	.1653	.2047	.2434	.2815	.3189	.3557	.3918			
1.6	.0411	.0814	.1210	.1597	.1977	.2351	.2718	.3079	.3435	.3784			
1.7	.0395	.0782	.1162	.1534	.1899	.2259	.2612	.2959	.3301	.3637			
1.8	.0377	.0747	.1110	.1466	.1816	.2159	.2497	.2830	.3158	.3481			
1.9	.0358	.0710	.1055	.1394	.1727	.2055	.2377	.2695	.3009	.3317			
2.0	.0339	.0671	.0998	.1319	.1636	.1947	.2254	.2556	.2855	.3150			
2.1	.0318	.0631	.0940	.1243	.1542	.1837	.2128	.2415	.2699	.2979			
2.2	.0298	.0591	.0881	.1166	.1448	.1726	.2001	.2273	.2542	.2808			
2.3	.0277	.0551	.0822	.1089	.1353	.1615	.1874	.2131	.2386	.2638			
2.4	.0257	.0511	.0763	.1013	.1260	.1506	.1749	.1991	.2231	.2469			
2.5	.0237	.0472	.0706	.0938	.1169	.1398	.1626	.1853	.2079	.2304			
2.6	.0217	.0434	.0649	.0864	.1079	.1292	.1506	.1718	.1930	.2142			
2.7	.0198	.0396	.0595	.0793	.0992	.1190	.1389	.1587	.1786	.1984			
2.8	.0180	.0361	.0542	.0724	.0907	.1091	.1275	.1460	.1645	.1831			
2.9	.0162	.0326	.0492	.0658	.0826	.0996	.1166	.1338	.1511	.1684			
3.0	.0145	.0293	.0443	.0595	.0749	.0905	.1062	.1221	.1381	.1542			
3.1	.0129	.0262	.0397	.0535	.0675	.0818	.0962	.1109	.1257	.1407			
3.2	.0114	.0232	.0354	.0478	.0605	.0735	.0867	.1002	.1139	.1278			
3.3	.0100	.0205	.0313	.0424	.0539	.0657	.0778	.0901	.1027	.1155			
3.4	.0087	.0179	.0274	.0374	.0477	.0583	.0693	.0805	.0921	.1039			
3.5	.0075	.0154	.0238	.0326	.0419	.0514	.0613	.0716	.0821	.0930			
3.6	.0064	.0132	.0205	.0282	.0364	.0450	.0539	.0632	.0728	.0827			
3.7	.0053	.0111	.0174	.0242	.0314	.0390	.0470	.0553	.0640	.0730			
3.8	.0043	.0092	.0146	.0204	.0267	.0334	.0405	.0480	.0559	.0640			
3.9	.0035	.0075	.0120	.0170	.0224	.0283	.0346	.0412	.0483	.0557			
4.0	.0027	.0059	.0096	.0138	.0185	.0236	.0291	.0350	.0413	.0479			
4.2	.0013	.0032	.0055	.0084	.0116	.0154	.0195	.0240	.0289	.0342			
4.4	.0003	.0010	.0023	.0039	.0061	.0086	.0116	.0149	.0187	.0227			
4.6		-.0007	-.0003	.0005	.0017	.0033	.0052	.0076	.0103	.0133			
4.8						-.0009	.0003	.0017	.0036	.0057			
5.0										-.0002			

Table XV

$b=.7$		Values of $-du/dx$										$b=.7$	
x	$a=1.1$	$a=1.2$	$a=1.3$	$a=1.4$	$a=1.5$	$a=1.6$	$a=1.7$	$a=1.8$	$a=1.9$	$a=2.0$			
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000		.0000	
.1	.1023	.1116	.1209	.1301	.1394	.1487	.1580	.1672	.1765	.1857		.1857	
.2	.1894	.2065	.2236	.2407	.2577	.2747	.2917	.3087	.3257	.3426		.3426	
.3	.2620	.2854	.3089	.3323	.3556	.3788	.4020	.4252	.4483	.4713		.4713	
.4	.3210	.3495	.3780	.4063	.4345	.4625	.4905	.5184	.5461	.5738		.5738	
.5	.3678	.4002	.4324	.4643	.4962	.5278	.5593	.5906	.6218	.6528		.6528	
.6	.4037	.4388	.4737	.5083	.5427	.5769	.6108	.6445	.6780	.7112		.7112	
.7	.4299	.4669	.5037	.5401	.5761	.6119	.6474	.6826	.7175	.7521		.7521	
.8	.4479	.4860	.5239	.5613	.5984	.6351	.6714	.7074	.7431	.7784		.7784	
.9	.4587	.4974	.5358	.5737	.6111	.6482	.6848	.7211	.7570	.7925		.7925	
1.0	.4635	.5023	.5407	.5786	.6160	.6530	.6896	.7257	.7614	.7968		.7968	
1.1	.4633	.5018	.5399	.5774	.6145	.6511	.6872	.7229	.7581	.7930		.7930	
1.2	.4588	.4968	.5343	.5712	.6076	.6436	.6791	.7141	.7487	.7829		.7829	
1.3	.4510	.4882	.5248	.5609	.5965	.6317	.6663	.7006	.7343	.7677		.7677	
1.4	.4403	.4766	.5123	.5474	.5821	.6162	.6500	.6833	.7161	.7486		.7486	
1.5	.4275	.4626	.4972	.5313	.5649	.5980	.6308	.6631	.6950	.7265		.7265	
1.6	.4126	.4468	.4802	.5132	.5457	.5777	.6094	.6406	.6715	.7020		.7020	
1.7	.3969	.4296	.4618	.4935	.5249	.5558	.5864	.6166	.6464	.6759		.6759	
1.8	.3799	.4113	.4422	.4728	.5030	.5328	.5622	.5913	.6201	.6486		.6486	
1.9	.3622	.3923	.4220	.4513	.4803	.5089	.5372	.5652	.5930	.6204		.6204	
2.0	.3441	.3728	.4012	.4293	.4571	.4846	.5118	.5387	.5654	.5918		.5918	
2.1	.3257	.3531	.3802	.4071	.4337	.4600	.4861	.5120	.5376	.5630		.5630	
2.2	.3072	.3333	.3592	.3848	.4102	.4354	.4604	.4852	.5098	.5342		.5342	
2.3	.2888	.3136	.3382	.3626	.3869	.4110	.4349	.4586	.4822	.5057		.5057	
2.4	.2706	.2941	.3175	.3407	.3638	.3868	.4097	.4324	.4550	.4775		.4775	
2.5	.2527	.2750	.2972	.3192	.3412	.3631	.3849	.4066	.4282	.4497		.4497	
2.6	.2353	.2563	.2773	.2982	.3190	.3398	.3605	.3813	.4020	.4226		.4226	
2.7	.2182	.2380	.2579	.2777	.2974	.3172	.3370	.3567	.3764	.3961		.3961	
2.8	.2017	.2204	.2391	.2578	.2765	.2952	.3140	.3327	.3515	.3703		.3703	
2.9	.1858	.2033	.2209	.2385	.2562	.2740	.2918	.3096	.3274	.3453		.3453	
3.0	.1705	.1869	.2034	.2200	.2367	.2535	.2703	.2872	.3042	.3212		.3212	
3.1	.1559	.1712	.1867	.2022	.2179	.2337	.2497	.2657	.2818	.2979		.2979	
3.2	.1419	.1562	.1706	.1852	.2000	.2149	.2299	.2450	.2602	.2756		.2756	
3.3	.1286	.1419	.1553	.1690	.1828	.1968	.2109	.2252	.2396	.2541		.2541	
3.4	.1160	.1283	.1408	.1535	.1665	.1796	.1928	.2063	.2199	.2336		.2336	
3.5	.1041	.1155	.1271	.1389	.1509	.1632	.1756	.1883	.2011	.2140		.2140	
3.6	.0929	.1034	.1141	.1251	.1363	.1477	.1593	.1712	.1832	.1954		.1954	
3.7	.0824	.0920	.1019	.1120	.1224	.1331	.1439	.1550	.1662	.1777		.1777	
3.8	.0725	.0813	.0904	.0998	.1094	.1193	.1294	.1397	.1502	.1609		.1609	
3.9	.0634	.0714	.0797	.0883	.0972	.1063	.1157	.1252	.1351	.1451		.1451	
4.0	.0549	.0622	.0697	.0776	.0857	.0942	.1028	.1117	.1208	.1302		.1302	
4.2	.0398	.0457	.0519	.0584	.0652	.0723	.0796	.0872	.0951	.1031		.1031	
4.4	.0271	.0318	.0368	.0421	.0477	.0535	.0597	.0660	.0726	.0795		.0795	
4.6	.0166	.0202	.0242	.0284	.0329	.0377	.0427	.0479	.0534	.0592		.0592	
4.8	.0081	.0108	.0138	.0171	.0206	.0244	.0285	.0327	.0372	.0420		.0420	
5.0	.0017	.0034	.0056	.0080	.0107	.0136	.0168	.0202	.0238	.0276		.0276	
5.2		-.0024	-.0009	.0009	.0028	.0050	.0074	.0100	.0129	.0159		.0159	
5.4								.0020	.0042	.0065		.0065	

Table XV

$b=.7$		Values of $-du/dx$										$b=.7$	
x	$a=2.1$	$a=2.2$	$a=2.3$	$a=2.4$	$a=2.5$	$a=2.6$	$a=2.7$	$a=2.8$	$a=2.9$	$a=3.0$			
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000		.0000	
.1	.1950	.2043	.2135	.2228	.2320	.2412	.2505	.2597	.2689	.2782		.2782	
.2	.3595	.3765	.3933	.4102	.4271	.4439	.4607	.4775	.4943	.5110		.5110	
.3	.4943	.5173	.5401	.5630	.5857	.6085	.6311	.6538	.6763	.6989		.6989	
.4	.6014	.6288	.6562	.6835	.7106	.7377	.7646	.7915	.8183	.8449		.8449	
.5	.6836	.7143	.7448	.7752	.8054	.8354	.8653	.8951	.9247	.9542		.9542	
.6	.7442	.7771	.8097	.8420	.8742	.9062	.9379	.9695	1.0009	1.0320		1.0320	
.7	.7865	.8206	.8544	.8880	.9213	.9543	.9871	1.0196	1.0519	1.0840		1.0840	
.8	.8134	.8481	.8825	.9166	.9503	.9838	1.0170	1.0499	1.0826	1.1149		1.1149	
.9	.8277	.8625	.8970	.9311	.9649	.9984	1.0315	1.0644	1.0969	1.1291		1.1291	
1.0	.8317	.8663	.9005	.9343	.9678	1.0009	1.0337	1.0662	1.0984	1.1302		1.1302	
1.1	.8275	.8615	.8952	.9285	.9614	.9940	1.0263	1.0582	1.0898	1.1211		1.1211	
1.2	.8167	.8501	.8831	.9156	.9479	.9798	1.0113	1.0426	1.0735	1.1040		1.1040	
1.3	.8007	.8333	.8655	.8973	.9287	.9598	.9906	1.0211	1.0512	1.0810		1.0810	
1.4	.7807	.8124	.8437	.8747	.9053	.9356	.9655	.9952	1.0245	1.0535		1.0535	
1.5	.7576	.7884	.8188	.8488	.8785	.9080	.9371	.9659	.9944	1.0226		1.0226	
1.6	.7322	.7620	.7915	.8206	.8494	.8780	.9062	.9342	.9619	.9893		.9893	
1.7	.7050	.7339	.7624	.7906	.8186	.8462	.8736	.9008	.9277	.9543		.9543	
1.8	.6767	.7046	.7322	.7595	.7865	.8133	.8399	.8662	.8923	.9181		.9181	
1.9	.6476	.6745	.7011	.7275	.7537	.7796	.8054	.8309	.8562	.8813		.8813	
2.0	.6180	.6439	.6697	.6952	.7205	.7455	.7704	.7952	.8197	.8440		.8440	
2.1	.5882	.6132	.6380	.6626	.6871	.7114	.7354	.7593	.7831	.8067		.8067	
2.2	.5585	.5825	.6065	.6302	.6538	.6772	.7005	.7237	.7467	.7696		.7696	
2.3	.5290	.5521	.5751	.5980	.6208	.6434	.6659	.6883	.7106	.7327		.7327	
2.4	.4998	.5219	.5442	.5663	.5882	.6100	.6318	.6534	.6749	.6964		.6964	
2.5	.4712	.4925	.5138	.5350	.5561	.5772	.5982	.6191	.6399	.6606		.6606	
2.6	.4431	.4636	.4840	.5044	.5247	.5450	.5652	.5854	.6055	.6256		.6256	
2.7	.4157	.4354	.4550	.4745	.4941	.5136	.5331	.5525	.5719	.5913		.5913	
2.8	.3891	.4079	.4267	.4454	.4642	.4830	.5017	.5204	.5391	.5578		.5578	
2.9	.3633	.3812	.3992	.4172	.4352	.4532	.4712	.4892	.5072	.5253		.5253	
3.0	.3383	.3554	.3726	.3898	.4070	.4243	.4416	.4589	.4763	.4936		.4936	
3.1	.3142	.3305	.3469	.3633	.3798	.3964	.4130	.4296	.4463	.4629		.4629	
3.2	.2910	.3065	.3221	.3378	.3536	.3694	.3853	.4012	.4172	.4333		.4333	
3.3	.2687	.2835	.2983	.3133	.3283	.3434	.3586	.3739	.3892	.4046		.4046	
3.4	.2474	.2614	.2755	.2897	.3040	.3185	.3330	.3476	.3622	.3770		.3770	
3.5	.2271	.2403	.2537	.2672	.2808	.2945	.3083	.3223	.3363	.3504		.3504	
3.6	.2077	.2202	.2328	.2456	.2586	.2716	.2847	.2980	.3114	.3248		.3248	
3.7	.1893	.2010	.2130	.2251	.2373	.2497	.2622	.2748	.2875	.3004		.3004	
3.8	.1718	.1829	.1941	.2055	.2171	.2288	.2407	.2527	.2648	.2770		.2770	
3.9	.1553	.1657	.1762	.1870	.1979	.2090	.2202	.2316	.2430	.2546		.2546	
4.0	.1397	.1494	.1594	.1695	.1797	.1902	.2008	.2115	.2224	.2334		.2334	
4.2	.1113	.1195	.1283	.1373	.1463	.1555	.1649	.1745	.1841	.1940		.1940	
4.4	.0865	.0938	.1013	.1089	.1168	.1249	.1331	.1415	.1500	.1587		.1587	
4.6	.0651	.0713	.0777	.0842	.0910	.0979	.1051	.1124	.1198	.1275		.1275	
4.8	.0469	.0520	.0574	.0630	.0687	.0746	.0807	.0870	.0935	.1001		.1001	
5.0	.0316	.0359	.0403	.0449	.0497	.0547	.0598	.0652	.0707	.0763		.0763	
5.2	.0191	.0225	.0261	.0298	.0338	.0379	.0422	.0466	.0512	.0560		.0560	
5.4	.0090	.0116	.0145	.0175	.0206	.0240	.0275	.0311	.0349	.0389		.0389	
5.6	.0010	.0050	.0052	.0076	.0100	.0127	.0155	.0184	.0215	.0247		.0247	

Table XV

$b=.8$		Values of $-du/dx$										$b=.8$
x	$a=.1$	$a=.2$	$a=.3$	$a=.4$	$a=.5$	$a=.6$	$a=.7$	$a=.8$	$a=.9$	$a=1.0$		
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	
.1	.0092	.0184	.0277	.0369	.0461	.0553	.0645	.0737	.0829	.0921		
.2	.0170	.0340	.0509	.0679	.0848	.1017	.1185	.1354	.1522	.1691		
.3	.0235	.0468	.0702	.0935	.1167	.1398	.1630	.1860	.2090	.2320		
.4	.0287	.0573	.0858	.1142	.1425	.1707	.1987	.2267	.2545	.2823		
.5	.0329	.0657	.0982	.1306	.1629	.1949	.2268	.2585	.2900	.3214		
.6	.0362	.0721	.1078	.1432	.1784	.2134	.2481	.2825	.3168	.3508		
.7	.0387	.0770	.1149	.1526	.1899	.2268	.2635	.2999	.3360	.3717		
.8	.0404	.0803	.1198	.1589	.1977	.2360	.2740	.3115	.3487	.3856		
.9	.0414	.0824	.1229	.1628	.2024	.2415	.2801	.3183	.3561	.3934		
1.0	.0420	.0834	.1243	.1646	.2045	.2438	.2826	.3210	.3589	.3963		
1.1	.0421	.0835	.1243	.1646	.2044	.2435	.2822	.3203	.3579	.3951		
1.2	.0417	.0828	.1233	.1631	.2024	.2411	.2792	.3168	.3539	.3905		
1.3	.0411	.0815	.1212	.1603	.1989	.2368	.2742	.3111	.3474	.3832		
1.4	.0401	.0796	.1184	.1565	.1941	.2311	.2675	.3035	.3388	.3737		
1.5	.0390	.0773	.1149	.1519	.1884	.2243	.2596	.2944	.3287	.3626		
1.6	.0376	.0746	.1109	.1467	.1819	.2165	.2506	.2843	.3174	.3501		
1.7	.0361	.0716	.1066	.1409	.1748	.2081	.2409	.2733	.3052	.3367		
1.8	.0345	.0685	.1019	.1348	.1672	.1991	.2306	.2617	.2923	.3226		
1.9	.0329	.0652	.0970	.1284	.1593	.1898	.2199	.2496	.2790	.3080		
2.0	.0311	.0618	.0920	.1218	.1513	.1803	.2090	.2374	.2654	.2931		
2.1	.0294	.0583	.0869	.1152	.1431	.1707	.1980	.2250	.2517	.2782		
2.2	.0276	.0549	.0819	.1085	.1349	.1611	.1870	.2126	.2380	.2632		
2.3	.0259	.0515	.0768	.1019	.1268	.1515	.1760	.2003	.2245	.2484		
2.4	.0241	.0481	.0718	.0954	.1189	.1422	.1653	.1883	.2112	.2339		
2.5	.0224	.0448	.0670	.0891	.1111	.1329	.1547	.1765	.1981	.2196		
2.6	.0208	.0415	.0622	.0829	.1035	.1240	.1445	.1650	.1854	.2057		
2.7	.0192	.0384	.0576	.0769	.0961	.1153	.1346	.1538	.1730	.1923		
2.8	.0177	.0354	.0532	.0711	.0890	.1070	.1250	.1430	.1611	.1792		
2.9	.0162	.0325	.0490	.0655	.0822	.0989	.1158	.1327	.1496	.1667		
3.0	.0148	.0298	.0449	.0602	.0757	.0913	.1069	.1227	.1386	.1546		
3.1	.0135	.0272	.0410	.0552	.0695	.0839	.0985	.1133	.1281	.1431		
3.2	.0122	.0247	.0375	.0504	.0636	.0770	.0905	.1042	.1181	.1321		
3.3	.0111	.0224	.0340	.0469	.0580	.0704	.0829	.0956	.1086	.1217		
3.4	.0100	.0202	.0308	.0416	.0528	.0641	.0757	.0875	.0995	.1118		
3.5	.0089	.0182	.0278	.0376	.0478	.0583	.0689	.0799	.0910	.1024		
3.6	.0080	.0163	.0249	.0339	.0432	.0527	.0626	.0727	.0830	.0935		
3.7	.0071	.0145	.0223	.0304	.0388	.0476	.0566	.0659	.0754	.0852		
3.8	.0063	.0129	.0199	.0272	.0348	.0428	.0510	.0596	.0683	.0774		
3.9	.0055	.0114	.0176	.0242	.0311	.0383	.0458	.0536	.0617	.0700		
4.0	.0048	.0100	.0155	.0214	.0276	.0342	.0410	.0481	.0555	.0632		
4.2	.0036	.0075	.0118	.0165	.0215	.0268	.0324	.0383	.0444	.0509		
4.4	.0026	.0055	.0088	.0124	.0163	.0205	.0251	.0299	.0349	.0403		
4.6	.0017	.0038	.0062	.0090	.0120	.0153	.0189	.0228	.0269	.0313		
4.8	.0011	.0025	.0042	.0062	.0085	.0110	.0138	.0169	.0202	.0238		
5.0	.0006	.0014	.0026	.0040	.0056	.0075	.0097	.0120	.0147	.0175		
5.2	.0002	.0006	.0013	.0022	.0034	.0047	.0063	.0081	.0102	.0124		
5.4	-.0001	.0001	.0003	.0009	.0016	.0026	.0037	.0050	.0065	.0082		
5.6		-.0004	-.0004	-.0001	.0003	.0009	.0017	.0026	.0037	.0050		
5.8					-.0007	-.0004	.0001	.0007	.0015	.0024		
6.0										.0003		

Table XV

$b=.8$		Values of $-du/dx$										$b=.8$
x	$a=1.1$	$a=1.2$	$a=1.3$	$a=1.4$	$a=1.5$	$a=1.6$	$a=1.7$	$a=1.8$	$a=1.9$	$a=2.0$		
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	
.1	.1013	.1105	.1197	.1289	.1381	.1473	.1564	.1656	.1748	.1839		
.2	.1859	.2026	.2194	.2361	.2529	.2696	.2863	.3029	.3196	.3362		
.3	.2549	.2778	.3006	.3233	.3460	.3687	.3913	.4138	.4363	.4587		
.4	.3100	.3375	.3649	.3923	.4195	.4467	.4738	.5007	.5276	.5543		
.5	.3526	.3837	.4146	.4453	.4759	.5063	.5366	.5667	.5966	.6265		
.6	.3845	.4181	.4514	.4845	.5173	.5500	.5825	.6147	.6468	.6786		
.7	.4072	.4424	.4773	.5119	.5463	.5804	.6142	.6477	.6810	.7141		
.8	.4221	.4582	.4940	.5295	.5647	.5995	.6341	.6683	.7022	.7358		
.9	.4304	.4670	.5032	.5390	.5744	.6095	.6443	.6787	.7128	.7465		
1.0	.4333	.4699	.5060	.5418	.5771	.6121	.6467	.6809	.7148	.7483		
1.1	.4318	.4680	.5038	.5392	.5741	.6087	.6429	.6766	.7101	.7431		
1.2	.4266	.4623	.4975	.5322	.5666	.6005	.6340	.6672	.6999	.7323		
1.3	.4185	.4534	.4878	.5218	.5554	.5885	.6213	.6537	.6857	.7173		
1.4	.4082	.4421	.4756	.5087	.5413	.5736	.6055	.6370	.6681	.6989		
1.5	.3960	.4289	.4614	.4935	.5252	.5565	.5874	.6180	.6482	.6781		
1.6	.3824	.4142	.4456	.4767	.5073	.5376	.5676	.5972	.6265	.6555		
1.7	.3678	.3985	.4288	.4587	.4884	.5176	.5466	.5752	.6035	.6316		
1.8	.3525	.3820	.4112	.4400	.4685	.4967	.5247	.5523	.5795	.6068		
1.9	.3366	.3650	.3930	.4207	.4482	.4754	.5023	.5289	.5553	.5814		
2.0	.3206	.3477	.3746	.4012	.4275	.4537	.4795	.5052	.5306	.5559		
2.1	.3044	.3303	.3561	.3816	.4068	.4319	.4568	.4814	.5059	.5302		
2.2	.2882	.3130	.3376	.3620	.3862	.4102	.4341	.4578	.4814	.5048		
2.3	.2722	.2958	.3193	.3426	.3658	.3888	.4117	.4344	.4571	.4796		
2.4	.2565	.2790	.3013	.3236	.3457	.3677	.3896	.4115	.4332	.4548		
2.5	.2411	.2624	.2837	.3049	.3260	.3471	.3680	.3889	.4097	.4305		
2.6	.2261	.2463	.2665	.2867	.3068	.3269	.3470	.3669	.3869	.4068		
2.7	.2115	.2307	.2499	.2690	.2882	.3073	.3264	.3455	.3646	.3837		
2.8	.1974	.2155	.2337	.2519	.2701	.2883	.3066	.3248	.3430	.3613		
2.9	.1838	.2009	.2181	.2354	.2527	.2700	.2874	.3047	.3221	.3396		
3.0	.1707	.1869	.2032	.2195	.2359	.2523	.2688	.2854	.3020	.3186		
3.1	.1582	.1735	.1889	.2042	.2197	.2353	.2510	.2667	.2826	.2984		
3.2	.1463	.1606	.1751	.1896	.2043	.2190	.2339	.2488	.2639	.2790		
3.3	.1350	.1484	.1620	.1757	.1895	.2035	.2175	.2317	.2460	.2603		
3.4	.1242	.1367	.1495	.1624	.1754	.1886	.2019	.2153	.2288	.2425		
3.5	.1140	.1257	.1376	.1497	.1620	.1744	.1870	.1997	.2125	.2254		
3.6	.1043	.1153	.1264	.1378	.1493	.1610	.1728	.1848	.1969	.2092		
3.7	.0952	.1054	.1158	.1264	.1372	.1482	.1594	.1706	.1821	.1937		
3.8	.0866	.0961	.1068	.1177	.1285	.1391	.1496	.1597	.1680	.1790		
3.9	.0786	.0874	.0964	.1057	.1151	.1247	.1346	.1446	.1547	.1650		
4.0	.0711	.0792	.0876	.0962	.1050	.1140	.1232	.1326	.1421	.1518		
4.2	.0576	.0645	.0717	.0791	.0867	.0945	.1025	.1107	.1190	.1276		
4.4	.0459	.0517	.0578	.0641	.0706	.0773	.0842	.0914	.0986	.1061		
4.6	.0360	.0408	.0459	.0512	.0567	.0625	.0684	.0745	.0808	.0873		
4.8	.0276	.0316	.0358	.0402	.0449	.0497	.0547	.0599	.0653	.0709		
5.0	.0206	.0238	.0273	.0309	.0348	.0388	.0430	.0474	.0520	.0567		
5.2	.0148	.0174	.0202	.0232	.0263	.0297	.0332	.0368	.0407	.0446		
5.4	.0101	.0122	.0144	.0168	.0193	.0220	.0249	.0279	.0311	.0344		
5.6	.0064	.0080	.0097	.0116	.0136	.0158	.0181	.0206	.0232	.0259		
5.8	.0035	.0046	.0060	.0074	.0090	.0107	.0126	.0145	.0166	.0189		
6.0	.0012	.0021	.0031	.0042	.0054	.0067	.0081	.0097	.0113	.0131		

Table XV

$b=.8$		Values of $-du/dx$										$b=.8$
x	$a=2.1$	$a=2.2$	$a=2.3$	$a=2.4$	$a=2.5$	$a=2.6$	$a=2.7$	$a=2.8$	$a=2.9$	$a=3.0$		
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	
.1	.1931	.2023	.2114	.2206	.2298	.2389	.2481	.2572	.2664	.2755		
.2	.3529	.3695	.3860	.4026	.4191	.4356	.4522	.4686	.4851	.5016		
.3	.4811	.5035	.5257	.5480	.5702	.5923	.6144	.6365	.6585	.6804		
.4	.5810	.6076	.6341	.6604	.6867	.7129	.7390	.7651	.7910	.8168		
.5	.6561	.6857	.7150	.7443	.7734	.8023	.8311	.8598	.8884	.9168		
.6	.7108	.7417	.7729	.8040	.8349	.8655	.8960	.9263	.9566	.9864		
.7	.7469	.7794	.8117	.8438	.8757	.9073	.9387	.9699	1.0008	1.0315		
.8	.7692	.8023	.8350	.8676	.8998	.9318	.9635	.9950	1.0262	1.0572		
.9	.7800	.8131	.8459	.8784	.9106	.9426	.9742	1.0056	1.0367	1.0675		
1.0	.7815	.8144	.8469	.8791	.9110	.9426	.9739	1.0050	1.0357	1.0661		
1.1	.7758	.8082	.8402	.8719	.9033	.9343	.9651	.9956	1.0258	1.0557		
1.2	.7644	.7961	.8275	.8585	.8892	.9197	.9498	.9796	1.0092	1.0384		
1.3	.7486	.7795	.8102	.8405	.8704	.9001	.9295	.9586	.9875	1.0160		
1.4	.7294	.7595	.7893	.8189	.8481	.8770	.9056	.9340	.9621	.9899		
1.5	.7077	.7370	.7659	.7946	.8230	.8511	.8790	.9065	.9339	.9609		
1.6	.6842	.7125	.7406	.7685	.7960	.8233	.8504	.8772	.9038	.9301		
1.7	.6593	.6868	.7140	.7410	.7677	.7942	.8205	.8465	.8723	.8979		
1.8	.6336	.6602	.6866	.7127	.7386	.7643	.7897	.8150	.8400	.8649		
1.9	.6074	.6331	.6586	.6838	.7089	.7338	.7585	.7830	.8073	.8315		
2.0	.5809	.6057	.6303	.6548	.6790	.7031	.7270	.7508	.7744	.7979		
2.1	.5543	.5783	.6021	.6257	.6492	.6725	.6957	.7187	.7416	.7643		
2.2	.5280	.5511	.5740	.5969	.6195	.6421	.6645	.6868	.7090	.7310		
2.3	.5019	.5242	.5463	.5683	.5902	.6120	.6337	.6553	.6768	.6982		
2.4	.4763	.4977	.5190	.5403	.5614	.5825	.6034	.6243	.6451	.6658		
2.5	.4511	.4717	.4923	.5127	.5331	.5535	.5737	.5939	.6140	.6341		
2.6	.4266	.4464	.4661	.4858	.5055	.5251	.5446	.5641	.5836	.6030		
2.7	.4027	.4217	.4407	.4596	.4785	.4974	.5163	.5351	.5539	.5727		
2.8	.3795	.3977	.4159	.4341	.4523	.4705	.4887	.5068	.5250	.5431		
2.9	.3570	.3745	.3919	.4094	.4269	.4444	.4619	.4794	.4969	.5144		
3.0	.3353	.3520	.3687	.3855	.4023	.4191	.4359	.4527	.4696	.4865		
3.1	.3143	.3308	.3463	.3624	.3785	.3946	.4108	.4270	.4432	.4594		
3.2	.2942	.3094	.3247	.3401	.3555	.3710	.3865	.4021	.4176	.4333		
3.3	.2748	.2893	.3040	.3186	.3334	.3482	.3631	.3780	.3930	.4081		
3.4	.2562	.2701	.2840	.2980	.3121	.3263	.3406	.3549	.3692	.3837		
3.5	.2385	.2517	.2649	.2783	.2917	.3053	.3189	.3326	.3464	.3602		
3.6	.2216	.2341	.2467	.2594	.2722	.2851	.2981	.3112	.3244	.3377		
3.7	.2054	.2173	.2293	.2413	.2535	.2658	.2783	.2908	.3034	.3160		
3.8	.1901	.2013	.2126	.2241	.2357	.2474	.2592	.2711	.2832	.2953		
3.9	.1755	.1861	.1968	.2077	.2187	.2298	.2411	.2524	.2639	.2754		
4.0	.1617	.1717	.1818	.1921	.2025	.2131	.2238	.2346	.2455	.2565		
4.2	.1363	.1451	.1542	.1633	.1726	.1821	.1917	.2014	.2112	.2212		
4.4	.1137	.1215	.1295	.1376	.1459	.1543	.1628	.1715	.1803	.1892		
4.6	.0939	.1007	.1077	.1148	.1221	.1295	.1371	.1448	.1526	.1606		
4.8	.0766	.0825	.0885	.0948	.1011	.1076	.1143	.1210	.1280	.1350		
5.0	.0616	.0667	.0719	.0772	.0828	.0884	.0942	.1002	.1062	.1124		
5.2	.0488	.0531	.0575	.0621	.0669	.0717	.0767	.0819	.0872	.0926		
5.4	.0379	.0415	.0453	.0492	.0532	.0574	.0617	.0661	.0706	.0753		
5.6	.0288	.0318	.0349	.0382	.0416	.0451	.0487	.0525	.0564	.0604		
5.8	.0212	.0237	.0263	.0290	.0318	.0347	.0378	.0410	.0442	.0476		
6.0	.0150	.0170	.0191	.0213	.0237	.0261	.0286	.0313	.0340	.0368		

Table XV

$b=.9$		Values of $-du/dx$										$b=.9$	
x	$a=.1$	$a=.2$	$a=.3$	$a=.4$	$a=.5$	$a=.6$	$a=.7$	$a=.8$	$a=.9$	$a=1.0$			
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000		.0000	
.1	.0091	.0183	.0274	.0365	.0456	.0548	.0639	.0730	.0821	.0912		.0912	
.2	.0167	.0333	.0499	.0666	.0832	.0998	.1164	.1329	.1494	.1659		.1659	
.3	.0228	.0456	.0683	.0909	.1135	.1361	.1586	.1810	.2034	.2258		.2258	
.4	.0277	.0553	.0828	.1102	.1376	.1648	.1919	.2189	.2458	.2727		.2727	
.5	.0316	.0629	.0941	.1252	.1561	.1869	.2175	.2479	.2782	.3083		.3083	
.6	.0344	.0687	.1027	.1364	.1699	.2033	.2364	.2693	.3019	.3344		.3344	
.7	.0365	.0728	.1088	.1444	.1798	.2149	.2497	.2842	.3185	.3525		.3525	
.8	.0380	.0756	.1128	.1497	.1862	.2224	.2583	.2938	.3290	.3639		.3639	
.9	.0388	.0772	.1161	.1527	.1898	.2265	.2629	.2989	.3345	.3698		.3698	
1.0	.0391	.0778	.1160	.1537	.1910	.2279	.2643	.3003	.3360	.3712		.3712	
1.1	.0391	.0776	.1156	.1532	.1903	.2269	.2631	.2988	.3341	.3691		.3691	
1.2	.0386	.0767	.1143	.1514	.1880	.2241	.2597	.2949	.3296	.3640		.3640	
1.3	.0379	.0753	.1122	.1485	.1844	.2197	.2546	.2890	.3230	.3566		.3566	
1.4	.0370	.0735	.1094	.1448	.1797	.2142	.2482	.2817	.3148	.3475		.3475	
1.5	.0359	.0712	.1061	.1404	.1743	.2077	.2407	.2732	.3053	.3370		.3370	
1.6	.0346	.0688	.1024	.1356	.1683	.2005	.2324	.2638	.2948	.3255		.3255	
1.7	.0333	.0661	.0984	.1303	.1618	.1928	.2235	.2538	.2837	.3133		.3133	
1.8	.0318	.0632	.0942	.1248	.1550	.1848	.2142	.2433	.2721	.3006		.3006	
1.9	.0304	.0603	.0899	.1191	.1480	.1765	.2047	.2326	.2602	.2875		.2875	
2.0	.0288	.0573	.0855	.1133	.1409	.1681	.1951	.2218	.2482	.2744		.2744	
2.1	.0273	.0543	.0811	.1075	.1338	.1597	.1854	.2109	.2361	.2612		.2612	
2.2	.0258	.0513	.0767	.1018	.1267	.1513	.1758	.2001	.2242	.2481		.2481	
2.3	.0243	.0484	.0723	.0961	.1197	.1431	.1663	.1894	.2124	.2352		.2352	
2.4	.0228	.0455	.0681	.0905	.1128	.1350	.1570	.1790	.2008	.2226		.2226	
2.5	.0214	.0427	.0639	.0850	.1061	.1271	.1480	.1688	.1895	.2102		.2102	
2.6	.0200	.0399	.0599	.0797	.0996	.1194	.1392	.1589	.1786	.1982		.1982	
2.7	.0187	.0373	.0560	.0746	.0933	.1120	.1307	.1493	.1680	.1866		.1866	
2.8	.0174	.0348	.0522	.0697	.0873	.1048	.1225	.1401	.1577	.1754		.1754	
2.9	.0161	.0323	.0486	.0650	.0815	.0980	.1146	.1312	.1479	.1646		.1646	
3.0	.0150	.0300	.0452	.0605	.0759	.0914	.1070	.1227	.1384	.1542		.1542	
3.1	.0138	.0278	.0420	.0562	.0706	.0852	.0998	.1145	.1294	.1443		.1443	
3.2	.0128	.0257	.0389	.0522	.0656	.0792	.0929	.1068	.1207	.1348		.1348	
3.3	.0118	.0238	.0359	.0483	.0608	.0735	.0864	.0994	.1125	.1258		.1258	
3.4	.0108	.0219	.0332	.0446	.0563	.0682	.0802	.0924	.1047	.1172		.1172	
3.5	.0100	.0201	.0306	.0412	.0521	.0631	.0743	.0857	.0973	.1090		.1090	
3.6	.0091	.0185	.0281	.0380	.0480	.0583	.0688	.0794	.0903	.1013		.1013	
3.7	.0083	.0170	.0258	.0349	.0443	.0538	.0636	.0735	.0836	.0939		.0939	
3.8	.0076	.0155	.0237	.0321	.0407	.0496	.0586	.0679	.0774	.0870		.0870	
3.9	.0070	.0142	.0217	.0294	.0374	.0456	.0540	.0627	.0715	.0805		.0805	
4.0	.0063	.0129	.0198	.0269	.0343	.0419	.0497	.0577	.0660	.0744		.0744	
4.2	.0052	.0107	.0164	.0224	.0287	.0352	.0419	.0488	.0559	.0632		.0632	
4.4	.0043	.0088	.0136	.0186	.0238	.0293	.0350	.0410	.0471	.0534		.0534	
4.6	.0034	.0071	.0111	.0153	.0197	.0243	.0292	.0342	.0395	.0449		.0449	
4.8	.0028	.0058	.0090	.0125	.0161	.0200	.0241	.0284	.0328	.0375		.0375	
5.0	.0022	.0046	.0073	.0101	.0131	.0164	.0198	.0234	.0272	.0311		.0311	
5.2	.0017	.0037	.0058	.0081	.0106	.0133	.0161	.0191	.0223	.0257		.0257	
5.4	.0013	.0029	.0046	.0064	.0085	.0107	.0130	.0155	.0182	.0210		.0210	
5.6	.0010	.0022	.0036	.0051	.0067	.0085	.0104	.0125	.0147	.0171		.0171	
5.8	.0008	.0017	.0028	.0040	.0053	.0067	.0083	.0100	.0118	.0138		.0138	
6.0	.0006	.0013	.0021	.0030	.0041	.0052	.0065	.0079	.0094	.0110		.0110	
7.0	.0001	.0002	.0004	.0006	.0009	.0012	.0016	.0020	.0025	.0030		.0030	
8.0						.0000	.0001	.0002	.0003	.0004		.0004	

Table XV

$b=.9$		Values of $-du/dx$									$b=.9$
x	$a=1.1$	$a=1.2$	$a=1.3$	$a=1.4$	$a=1.5$	$a=1.6$	$a=1.7$	$a=1.8$	$a=1.9$	$a=2.0$	
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	
.1	.1003	.1094	.1185	.1276	.1367	.1458	.1549	.1640	.1731	.1822	
.2	.1824	.1989	.2153	.2318	.2482	.2646	.2810	.2973	.3137	.3300	
.3	.2481	.2704	.2926	.3147	.3368	.3589	.3809	.4028	.4248	.4466	
.4	.2994	.3260	.3526	.3790	.4056	.4316	.4578	.4839	.5099	.5358	
.5	.3383	.3681	.3978	.4273	.4567	.4860	.5151	.5441	.5729	.6016	
.6	.3666	.3987	.4306	.4622	.4937	.5249	.5560	.5869	.6176	.6481	
.7	.3862	.4197	.4529	.4859	.5186	.5511	.5834	.6154	.6472	.6787	
.8	.3984	.4327	.4667	.5004	.5338	.5669	.5998	.6323	.6646	.6967	
.9	.4047	.4393	.4735	.5074	.5410	.5743	.6073	.6400	.6724	.7045	
1.0	.4061	.4406	.4747	.5085	.5420	.5751	.6079	.6403	.6725	.7043	
1.1	.4036	.4377	.4715	.5049	.5379	.5706	.6029	.6349	.6666	.6980	
1.2	.3979	.4315	.4646	.4974	.5298	.5619	.5936	.6250	.6561	.6869	
1.3	.3898	.4226	.4551	.4871	.5187	.5501	.5810	.6117	.6421	.6721	
1.4	.3798	.4117	.4433	.4745	.5053	.5358	.5660	.5958	.6254	.6546	
1.5	.3684	.3993	.4300	.4602	.4902	.5198	.5491	.5780	.6067	.6352	
1.6	.3559	.3858	.4154	.4447	.4737	.5024	.5308	.5589	.5867	.6143	
1.7	.3425	.3714	.4001	.4284	.4564	.4841	.5116	.5388	.5657	.5921	
1.8	.3287	.3566	.3841	.4114	.4385	.4652	.4918	.5180	.5441	.5699	
1.9	.3146	.3414	.3679	.3942	.4202	.4460	.4716	.4970	.5222	.5471	
2.0	.3003	.3260	.3515	.3768	.4018	.4267	.4514	.4758	.5001	.5242	
2.1	.2861	.3107	.3351	.3594	.3835	.4074	.4311	.4547	.4781	.5014	
2.2	.2719	.2955	.3189	.3422	.3653	.3883	.4111	.4338	.4563	.4788	
2.3	.2579	.2805	.3029	.3252	.3474	.3694	.3913	.4132	.4349	.4565	
2.4	.2442	.2667	.2879	.3085	.3298	.3509	.3720	.3929	.4138	.4346	
2.5	.2308	.2514	.2719	.2922	.3126	.3328	.3530	.3732	.3932	.4132	
2.6	.2178	.2374	.2569	.2764	.2958	.3152	.3346	.3539	.3732	.3924	
2.7	.2052	.2239	.2425	.2611	.2796	.2982	.3167	.3352	.3537	.3722	
2.8	.1931	.2108	.2285	.2462	.2639	.2816	.2993	.3171	.3348	.3525	
2.9	.1814	.1982	.2150	.2319	.2487	.2657	.2826	.2995	.3165	.3335	
3.0	.1701	.1860	.2020	.2181	.2341	.2503	.2664	.2826	.2989	.3151	
3.1	.1593	.1744	.1896	.2048	.2201	.2355	.2509	.2664	.2819	.2974	
3.2	.1490	.1633	.1777	.1921	.2067	.2213	.2360	.2507	.2655	.2804	
3.3	.1392	.1527	.1663	.1800	.1938	.2077	.2217	.2357	.2498	.2640	
3.4	.1298	.1425	.1554	.1684	.1815	.1947	.2080	.2213	.2348	.2483	
3.5	.1209	.1329	.1451	.1573	.1697	.1823	.1949	.2076	.2204	.2333	
3.6	.1124	.1238	.1352	.1468	.1585	.1704	.1824	.1945	.2066	.2189	
3.7	.1044	.1151	.1259	.1368	.1479	.1591	.1705	.1819	.1935	.2052	
3.8	.0969	.1069	.1170	.1274	.1378	.1484	.1592	.1700	.1810	.1921	
3.9	.0897	.0991	.1087	.1184	.1283	.1383	.1484	.1587	.1691	.1797	
4.0	.0830	.0918	.1008	.1099	.1192	.1287	.1382	.1480	.1578	.1678	
4.2	.0707	.0784	.0863	.0944	.1026	.1110	.1195	.1281	.1369	.1459	
4.4	.0599	.0667	.0735	.0806	.0878	.0952	.1027	.1104	.1182	.1262	
4.6	.0505	.0563	.0623	.0685	.0748	.0812	.0879	.0946	.1016	.1086	
4.8	.0423	.0473	.0525	.0578	.0633	.0690	.0747	.0807	.0868	.0930	
5.0	.0352	.0395	.0440	.0486	.0533	.0582	.0633	.0685	.0738	.0793	
5.2	.0292	.0328	.0366	.0406	.0447	.0489	.0533	.0578	.0624	.0672	
5.4	.0240	.0271	.0303	.0337	.0372	.0408	.0446	.0485	.0525	.0566	
5.6	.0195	.0222	.0249	.0278	.0307	.0338	.0371	.0404	.0439	.0474	
5.8	.0153	.0180	.0203	.0227	.0253	.0279	.0306	.0335	.0365	.0395	
6.0	.0127	.0145	.0165	.0185	.0206	.0228	.0252	.0276	.0301	.0327	
7.0	.0036	.0043	.0050	.0058	.0066	.0074	.0084	.0093	.0104	.0115	
8.0	.0006	.0008	.0010	.0012	.0015	.0018	.0021	.0024	.0027	.0031	
9.0					.0000	.0001	.0001	.0002	.0003	.0004	

Table XV

$b=.9$		Values of $-du/dx$										$b=.9$	
x	$a=2.1$	$a=2.2$	$a=2.3$	$a=2.4$	$a=2.5$	$a=2.6$	$a=2.7$	$a=2.8$	$a=2.9$	$a=3.0$			
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000			
.1	.1912	.2003	.2094	.2185	.2276	.2366	.2457	.2547	.2638	.2728			
.2	.3463	.3626	.3789	.3952	.4114	.4276	.4438	.4600	.4762	.4923			
.3	.4684	.4902	.5119	.5336	.5552	.5768	.5983	.6198	.6413	.6626			
.4	.5616	.5873	.6130	.6385	.6640	.6893	.7146	.7398	.7650	.7900			
.5	.6302	.6586	.6869	.7151	.7431	.7711	.7988	.8265	.8540	.8814			
.6	.6784	.7086	.7386	.7684	.7980	.8275	.8567	.8859	.9149	.9437			
.7	.7101	.7412	.7721	.8028	.8333	.8636	.8936	.9235	.9532	.9827			
.8	.7284	.7600	.7913	.8223	.8531	.8837	.9140	.9441	.9740	1.0037			
.9	.7363	.7678	.7991	.8301	.8608	.8913	.9216	.9516	.9813	1.0108			
1.0	.7359	.7671	.7981	.8288	.8592	.8894	.9192	.9489	.9783	1.0074			
1.1	.7290	.7598	.7903	.8205	.8504	.8801	.9094	.9385	.9674	.9961			
1.2	.7173	.7475	.7773	.8069	.8362	.8652	.8940	.9225	.9508	.9788			
1.3	.7018	.7313	.7604	.7893	.8179	.8463	.8743	.9022	.9298	.9572			
1.4	.6836	.7123	.7407	.7688	.7967	.8243	.8517	.8788	.9057	.9324			
1.5	.6633	.6912	.7188	.7462	.7733	.8001	.8268	.8532	.8794	.9053			
1.6	.6416	.6686	.6954	.7220	.7484	.7745	.8004	.8261	.8516	.8768			
1.7	.6189	.6451	.6711	.6969	.7224	.7478	.7730	.7980	.8227	.8473			
1.8	.5955	.6209	.6461	.6711	.6959	.7206	.7450	.7692	.7933	.8172			
1.9	.5719	.5965	.6209	.6451	.6691	.6930	.7167	.7403	.7636	.7869			
2.0	.5482	.5719	.5955	.6190	.6423	.6654	.6884	.7112	.7339	.7565			
2.1	.5245	.5475	.5703	.5930	.6155	.6379	.6602	.6824	.7044	.7263			
2.2	.5011	.5232	.5453	.5672	.5891	.6108	.6323	.6538	.6752	.6965			
2.3	.4780	.4994	.5207	.5419	.5630	.5840	.6049	.6257	.6463	.6670			
2.4	.4553	.4760	.4965	.5170	.5374	.5577	.5779	.5981	.6182	.6381			
2.5	.4332	.4531	.4729	.4926	.5123	.5319	.5515	.5710	.5905	.6098			
2.6	.4116	.4307	.4498	.4689	.4879	.5068	.5257	.5446	.5634	.5822			
2.7	.3906	.4090	.4274	.4457	.4640	.4823	.5006	.5188	.5370	.5552			
2.8	.3702	.3879	.4056	.4233	.4409	.4586	.4762	.4938	.5114	.5289			
2.9	.3505	.3675	.3845	.4015	.4185	.4355	.4525	.4695	.4865	.5034			
3.0	.3314	.3477	.3641	.3804	.3968	.4131	.4295	.4459	.4623	.4787			
3.1	.3130	.3287	.3443	.3600	.3758	.3915	.4073	.4231	.4389	.4547			
3.2	.2953	.3103	.3253	.3404	.3555	.3706	.3858	.4010	.4162	.4315			
3.3	.2783	.2926	.3070	.3215	.3360	.3505	.3651	.3797	.3943	.4090			
3.4	.2620	.2757	.2894	.3033	.3172	.3311	.3451	.3591	.3732	.3874			
3.5	.2463	.2594	.2726	.2858	.2991	.3125	.3259	.3393	.3529	.3665			
3.6	.2313	.2438	.2564	.2690	.2817	.2945	.3074	.3203	.3333	.3464			
3.7	.2170	.2289	.2409	.2530	.2651	.2774	.2897	.3021	.3145	.3270			
3.8	.2033	.2147	.2261	.2376	.2492	.2609	.2727	.2845	.2965	.3085			
3.9	.1903	.2011	.2119	.2229	.2340	.2452	.2564	.2677	.2791	.2906			
4.0	.1779	.1881	.1985	.2089	.2195	.2301	.2408	.2516	.2626	.2736			
4.2	.1549	.1641	.1734	.1828	.1924	.2020	.2118	.2216	.2315	.2416			
4.4	.1343	.1425	.1508	.1593	.1679	.1766	.1854	.1943	.2033	.2124			
4.6	.1158	.1231	.1306	.1381	.1458	.1536	.1615	.1696	.1777	.1859			
4.8	.0994	.1059	.1125	.1192	.1261	.1330	.1401	.1473	.1546	.1620			
5.0	.0848	.0906	.0964	.1024	.1084	.1146	.1209	.1274	.1339	.1405			
5.2	.0721	.0771	.0822	.0875	.0928	.0983	.1039	.1096	.1154	.1213			
5.4	.0609	.0652	.0697	.0743	.0791	.0839	.0888	.0938	.0989	.1042			
5.6	.0511	.0549	.0588	.0628	.0670	.0712	.0755	.0799	.0844	.0890			
5.8	.0427	.0460	.0494	.0528	.0564	.0601	.0638	.0677	.0716	.0757			
6.0	.0354	.0383	.0412	.0442	.0473	.0504	.0537	.0570	.0605	.0640			
7.0	.0126	.0138	.0150	.0164	.0177	.0191	.0206	.0222	.0237	.0254			
8.0	.0035	.0039	.0044	.0049	.0054	.0059	.0065	.0071	.0078	.0084			
9.0	.0005	.0006	.0007	.0009	.0010	.0012	.0014	.0016	.0018	.0020			
10.0							.0000	.0000	.0001	.0001			

Table XVI

Values of $-du/dx$

x	$b=.1$	$b=.2$	$b=.3$	$b=.3$	$b=.4$	$b=.4$	$b=.4$	$b=.4$	$b=.5$	$b=.5$
u_0	.0200	.0800	.1000	.1800	.1000	.2000	.3000	.3200	.1000	.2000
0	.2000	.4000	.2000	.6000	.1367	.3101	.6000	.8000	.1056	.2254
.1	.1990	.3980	.1990	.5970	.1360	.3086	.5970	.7960	.1051	.2243
.2	.1960	.3920	.1961	.5880	.1341	.3041	.5882	.7841	.1036	.2211
.3	.1911	.3821	.1914	.5732	.1310	.2969	.5738	.7643	.1013	.2161
.4	.1842	.3685	.1850	.5527	.1268	.2872	.5540	.7370	.0982	.2093
.5	.1756	.3512	.1771	.5268	.1217	.2751	.5292	.7026	.0944	.2011
.6	.1651	.3304	.1678	.4958	.1157	.2610	.4999	.6614	.0900	.1915
.7	.1531	.3066	.1572	.4603	.1090	.2451	.4665	.6143	.0852	.1809
.8	.1396	.2799	.1455	.4206	.1017	.2276	.4296	.5620	.0800	.1693
.9	.1248	.2507	.1329	.3776	.0939	.2090	.3899	.5054	.0745	.1571
1.0	.1089	.2195	.1196	.3316	.0858	.1893	.3479	.4455	.0687	.1443
1.1	.0921	.1867	.1058	.2838	.0773	.1690	.3044	.3833	.0628	.1312
1.2	.0745	.1527	.0916	.2344	.0688	.1483	.2601	.3198	.0569	.1180
1.3	.0563	.1181	.0772	.1848	.0601	.1275	.2155	.2562	.0509	.1047
1.4	.0379	.0832	.0628	.1351	.0515	.1068	.1714	.1935	.0450	.0916
1.5	.0194	.0486	.0486	.0866	.0430	.0865	.1283	.1326	.0392	.0787
1.6	.0011	.0148	.0346	.0395	.0348	.0667	.0868	.0744	.0335	.0662
1.7	-.0169	-.0180	.0211	-.0052	.0268	.0477	.0473	.0195	.0281	.0542
1.8			.0081		.0191	.0296	.0102	-.0315	.0229	.0428
1.9			-.0042		.0118	.0125	-.0242		.0179	.0320
2.0					.0050	-.0034			.0133	.0219
2.1					-.0014				.0090	.0125
2.2									.0049	.0039
2.3									.0013	-.0040
2.4									-.0021	

Table XVI

Values of $-du/dx$

x	$b=.5$	$b=.5$	$b=.5$	$b=.6$	$b=.6$	$b=.6$	$b=.6$	$b=.6$	$b=.6$	$b=.6$
u_0	.3000	.4000	.5000	.1000	.2000	.3000	.4000	.5000	.6000	.7000
0	.3675	.5528	1.0000	.0865	.1802	.2835	.4000	.5367	.7101	1.0000
.1	.3657	.5501	.9950	.0860	.1793	.2821	.3981	.5341	.7066	.9950
.2	.3605	.5421	.9801	.0849	.1768	.2782	.3924	.5264	.6964	.9803
.3	.3521	.5292	.9554	.0830	.1729	.2719	.3835	.5142	.6799	.9563
.4	.3409	.5117	.9213	.0805	.1677	.2636	.3716	.4979	.6576	.9234
.5	.3270	.4901	.8783	.0776	.1615	.2535	.3570	.4778	.6308	.8822
.6	.3109	.4647	.8271	.0742	.1543	.2420	.3403	.4546	.5981	.8338
.7	.2929	.4362	.7686	.0705	.1464	.2291	.3216	.4286	.5621	.7788
.8	.2732	.4050	.7039	.0665	.1378	.2153	.3014	.4004	.5229	.7186
.9	.2524	.3717	.6341	.0623	.1288	.2008	.2801	.3706	.4812	.6541
1.0	.2305	.3368	.5607	.0580	.1196	.1857	.2580	.3396	.4377	.5868
1.1	.2081	.3009	.4849	.0536	.1101	.1703	.2354	.3079	.3933	.5177
1.2	.1854	.2645	.4082	.0492	.1006	.1548	.2127	.2760	.3485	.4483
1.3	.1627	.2282	.3320	.0447	.0911	.1393	.1900	.2442	.3040	.3795
1.4	.1403	.1923	.2574	.0404	.0817	.1241	.1678	.2130	.2604	.3125
1.5	.1184	.1574	.1858	.0361	.0726	.1093	.1461	.1827	.2183	.2482
1.6	.0971	.1238	.1179	.0320	.0638	.0950	.1252	.1536	.1780	.1874
1.7	.0768	.0918	.0547	.0280	.0552	.0812	.1053	.1260	.1400	.1306
1.8	.0576	.0618	-.0034	.0242	.0471	.0682	.0864	.0999	.1044	.0784
1.9	.0395	.0338		.0206	.0395	.0559	.0687	.0757	.0715	.0310
2.0	.0227	.0081		.0172	.0323	.0444	.0522	.0533	.0415	-.0115
2.1	.0073	-.0153		.0140	.0256	.0337	.0371	.0328	.0144	
2.2	-.0068			.0111	.0194	.0240	.0232	.0143	.0099	
2.3				.0083	.0137	.0150	.0106	-.0023		
2.4				.0058	.0085	.0069	-.0006			
2.5				.0036	.0038	-.0003				
2.6				.0015	-.0004					
2.7				-.0003						

Table XVI
 Values of $-du/dx$

x	$b=.6$	$b=.7$	$b=.7$	$b=.7$	$b=.7$	$b=.7$	$b=.7$	$b=.7$	$b=.7$	$b=.7$
u_0	.7200	.1000	.2000	.3000	.4000	.5000	.6000	.7000	.8000	.9000
0	1.2000	.0734	.1510	.2338	.3230	.4202	.5282	.6517	.8000	1.0000
.1	1.1940	.0730	.1503	.2327	.3214	.4182	.5257	.6485	.7961	.9951
.2	1.1761	.0720	.1482	.2295	.3170	.4124	.5183	.6393	.7847	.9806
.3	1.1465	.0705	.1450	.2245	.3100	.4032	.5066	.6247	.7664	.9571
.4	1.1056	.0685	.1408	.2179	.3008	.3910	.4910	.6051	.7417	.9253
.5	1.0542	.0661	.1358	.2100	.2897	.3763	.4721	.5812	.7115	.8860
.6	.9930	.0634	.1301	.2011	.2770	.3594	.4504	.5536	.6765	.8400
.7	.9233	.0604	.1239	.1912	.2631	.3409	.4263	.5230	.6373	.7883
.8	.8464	.0572	.1173	.1807	.2482	.3209	.4005	.4899	.5949	.7321
.9	.7639	.0539	.1103	.1696	.2325	.3000	.3733	.4550	.5501	.6725
1.0	.6775	.0505	.1032	.1583	.2164	.2783	.3452	.4190	.5037	.6105
1.1	.5888	.0471	.0959	.1468	.2001	.2564	.3166	.3823	.4564	.5474
1.2	.4997	.0437	.0887	.1353	.1837	.2344	.2880	.3455	.4090	.4842
1.3	.4119	.0403	.0815	.1238	.1675	.2126	.2597	.3092	.3623	.4220
1.4	.3267	.0369	.0744	.1126	.1515	.1913	.2319	.2736	.3167	.3615
1.5	.2455	.0336	.0675	.1017	.1361	.1706	.2051	.2393	.2727	.3035
1.6	.1694	.0305	.0609	.0911	.1211	.1506	.1793	.2065	.2309	.2487
1.7	.0991	.0274	.0545	.0810	.1069	.1316	.1548	.1754	.1915	.1975
1.8	.0352	.0245	.0484	.0714	.0933	.1137	.1317	.1463	.1548	.1502
1.9	-.0221	.0217	.0426	.0623	.0806	.0968	.1102	.1192	.1210	.1071
2.0		.0191	.0372	.0538	.0687	.0811	.0902	.0942	.0900	.0682
2.1		.0167	.0321	.0458	.0576	.0666	.0718	.0715	.0621	-.0335
2.2		.0144	.0273	.0385	.0473	.0532	.0550	.0509	.0370	.0030
2.3		.0123	.0229	.0317	.0380	.0411	.0398	.0324	.0148	-.0237
2.4		.0103	.0189	.0254	.0294	.0301	.0262	.0159	-.0047	
2.5		.0085	.0152	.0198	.0217	.0202	.0141	.0015		
2.6		.0068	.0118	.0146	.0148	.0114	.0034	-.0111		
2.7		.0053	.0088	.0101	.0086	.0037	-.0059			
2.8		.0040	.0061	.0060	.0031	-.0031				
2.9		.0028	.0037	.0024	-.0016					
3.0		.0017	.0015	-.0008						
3.1		.0007	-.0004							
3.2		-.0002								

Table XVI
Values of $-du/dx$

x	$b=.7$	$b=.8$	$b=.8$	$b=.8$	$b=.8$	$b=.8$	$b=.8$	$b=.8$	$b=.8$	$b=.8$
u_0	.9800	.1000	.2000	.3000	.4000	.5000	.6000	.7000	.8000	.9000
0	1.4000	.0638	.1303	.2000	.2734	.3510	.4338	.5230	.6202	.7282
.1	1.3930	.0635	.1297	.1991	.2720	.3493	.4317	.5205	.6172	.7247
.2	1.3721	.0626	.1280	.1964	.2684	.3446	.4258	.5133	.6086	.7145
.3	1.3376	.0613	.1253	.1922	.2626	.3371	.4165	.5020	.5950	.6984
.4	1.2900	.0596	.1218	.1868	.2551	.3274	.4043	.4871	.5771	.6770
.5	1.2301	.0576	.1176	.1804	.2462	.3158	.3897	.4692	.5555	.6510
.6	1.1591	.0554	.1130	.1731	.2361	.3026	.3731	.4487	.5307	.6211
.7	1.0782	.0529	.1079	.1652	.2251	.2882	.3549	.4263	.5034	.5882
.8	.9895	.0504	.1026	.1568	.2134	.2728	.3355	.4023	.4742	.5528
.9	.8945	.0477	.0970	.1481	.2012	.2568	.3153	.3772	.4436	.5157
1.0	.7957	.0450	.0913	.1392	.1888	.2405	.2945	.3515	.4121	.4775
1.1	.6947	.0422	.0855	.1302	.1762	.2239	.2735	.3255	.3803	.4389
1.2	.5942	.0395	.0798	.1212	.1637	.2074	.2526	.2996	.3486	.4004
1.3	.4955	.0367	.0742	.1123	.1513	.1911	.2320	.2740	.3174	.3624
1.4	.4009	.0341	.0686	.1036	.1391	.1752	.2118	.2490	.2869	.3255
1.5	.3111	.0315	.0632	.0952	.1274	.1597	.1922	.2249	.2575	.2899
1.6	.2280	.0290	.0580	.0870	.1160	.1449	.1735	.2017	.2294	.2560
1.7	.1515	.0266	.0530	.0792	.1052	.1307	.1556	.1797	.2027	.2240
1.8	.0830	.0243	.0482	.0718	.0948	.1172	.1387	.1589	.1776	.1940
1.9	.0217	.0221	.0437	.0647	.0851	.1045	.1228	.1395	.1542	.1661
2.0	-.0314	.0200	.0394	.0581	.0759	.0926	.1079	.1214	.1325	.1404
2.1		.0180	.0354	.0518	.0673	.0815	.0941	.1046	.1126	.1168
2.2		.0162	.0316	.0460	.0593	.0712	.0813	.0892	.0943	.0955
2.3		.0145	.0281	.0406	.0519	.0617	.0696	.0752	.0777	.0782
2.4		.0129	.0248	.0356	.0451	.0530	.0589	.0624	.0628	.0589
2.5		.0114	.0218	.0310	.0389	.0450	.0492	.0509	.0494	.0436
2.6		.0100	.0190	.0268	.0331	.0378	.0405	.0405	.0375	.0301
2.7		.0088	.0165	.0229	.0280	.0313	.0326	.0313	.0269	.0183
2.8		.0076	.0141	.0194	.0233	.0254	.0255	.0231	.0176	.0080
2.9		.0065	.0120	.0163	.0190	.0201	.0193	.0159	.0095	-.0009
3.0		.0056	.0101	.0134	.0153	.0155	.0138	.0097	.0026	-.0084
3.1		.0047	.0084	.0108	.0119	.0114	.0089	.0042	-.0034	
3.2		.0039	.0068	.0085	.0089	.0077	.0047	-.0005	-.0084	
3.3		.0032	.0054	.0065	.0063	.0046	.0011			
3.4		.0026	.0042	.0047	.0040	.0018	-.0020			
3.5		.0020	.0031	.0031	.0020	-.0005				
3.6		.0015	.0022	.0018	.0003					
3.7		.0011	.0013	.0006	-.0012					
3.8		.0007	.0006	-.0004	-.0024					
3.9		.0004	.0001							
4.0		.0001	-.0006							

Table XVI
Values of $-du/dx$

x	$b=.8$	$b=.8$	$b=.8$	$b=.8$	$b=.9$	$b=.9$	$b=.9$	$b=.9$	$b=.9$	$b=.9$
u_0	1.0000	1.1000	1.2000	1.2800	.1000	.2000	.3000	.4000	.5000	.6000
0	.8517	1.0000	1.2000	1.6000	.0564	.1148	.1752	.2380	.3033	.3717
.1	.8475	.9951	1.1941	1.5920	.0562	.1142	.1744	.2368	.3019	.3699
.2	.8355	.9809	1.1767	1.5681	.0554	.1127	.1721	.2337	.2979	.3650
.3	.8164	.9580	1.1486	1.5287	.0543	.1104	.1685	.2288	.2916	.3573
.4	.7908	.9272	1.1104	1.4743	.0529	.1074	.1639	.2225	.2835	.3473
.5	.7597	.8895	1.0633	1.4060	.0512	.1040	.1585	.2151	.2740	.3354
.6	.7237	.8458	1.0083	1.3252	.0493	.1001	.1525	.2068	.2632	.3220
.7	.6839	.7972	.9467	1.2335	.0472	.0958	.1460	.1978	.2516	.3075
.8	.6411	.7447	.8799	1.1330	.0451	.0914	.1391	.1883	.2393	.2921
.9	.5960	.6893	.8092	1.0260	.0429	.0868	.1320	.1785	.2265	.2762
1.0	.5496	.6322	.7361	.9151	.0406	.0822	.1248	.1685	.2135	.2600
1.1	.5026	.5743	.6620	.8027	.0384	.0775	.1175	.1585	.2005	.2436
1.2	.4557	.5167	.5883	.6912	.0361	.0729	.1103	.1485	.1875	.2274
1.3	.4097	.4600	.5161	.5828	.0339	.0683	.1032	.1387	.1747	.2114
1.4	.3649	.4051	.4464	.4793	.0317	.0638	.0963	.1291	.1623	.1959
1.5	.3219	.3526	.3800	.3823	.0296	.0595	.0895	.1198	.1502	.1808
1.6	.2810	.3029	.3177	.2927	.0276	.0553	.0830	.1108	.1386	.1663
1.7	.2426	.2565	.2600	.2115	.0256	.0512	.0768	.1022	.1274	.1525
1.8	.2067	.2134	.2070	.1387	.0238	.0474	.0708	.0940	.1169	.1393
1.9	.1736	.1740	.1590	.0746	.0220	.0437	.0652	.0862	.1068	.1269
2.0	.1433	.1382	.1160	.0188	.0203	.0402	.0598	.0789	.0974	.1153
2.1	.1158	.1059	.0778	-.0290	.0187	.0369	.0547	.0720	.0886	.1043
2.2	.0909	.0772	.0443		.0172	.0338	.0500	.0655	.0803	.0942
2.3	.0688	.0518	.0152		.0157	.0309	.0456	.0595	.0726	.0847
2.4	.0491	.0295	-.0098		.0144	.0282	.0414	.0539	.0654	.0760
2.5	.0318	.0102			.0132	.0257	.0376	.0486	.0588	.0679
2.6	.0167	-.0063			.0120	.0233	.0340	.0438	.0527	.0606
2.7	.0037				.0109	.0211	.0307	.0394	.0471	.0538
2.8	-.0075				.0099	.0191	.0276	.0353	.0420	.0476
2.9					.0090	.0173	.0248	.0315	.0373	.0420
3.0					.0081	.0155	.0222	.0281	.0330	.0369
3.1					.0073	.0140	.0199	.0250	.0291	.0323
3.2					.0066	.0125	.0177	.0221	.0256	.0281
3.3					.0059	.0112	.0157	.0195	.0225	.0244
3.4					.0053	.0100	.0140	.0172	.0196	.0210
3.5					.0047	.0089	.0123	.0151	.0170	.0180
3.6					.0042	.0079	.0109	.0132	.0147	.0153
3.7					.0038	.0070	.0095	.0114	.0126	.0129
3.8					.0033	.0061	.0083	.0099	.0108	.0108
3.9					.0029	.0054	.0073	.0085	.0091	.0090
4.0					.0026	.0047	.0063	.0073	.0077	.0074
4.2					.0020	.0036	.0046	.0052	.0052	.0047
4.4					.0015	.0026	.0033	.0036	.0034	.0026
4.6					.0011	.0019	.0023	.0023	.0020	.0011
4.8					.0008	.0013	.0015	.0014	.0009	.0000
5.0					.0006	.0009	.0009	.0007	.0001	-.0008

Table XVI
Values of $-du/dx$

x	$b=.9$	$b=.9$	$b=.9$	$b=.9$	$b=.9$	$b=.9$	$b=.9$	$b=.9$	$b=.9$	$b=.9$	$b=.9$
u_0	.7000	.8000	.9000	1.0000	1.1000	1.2000	1.3000	1.4000	1.5000	1.6000	1.6200
0	.4435	.5194	.6000	.6865	.7802	.8835	1.0000	1.1367	1.3101	1.6000	1.8000
.1	.4414	.5169	.5971	.6832	.7764	.8792	.9951	1.1311	1.3037	1.5921	1.7910
.2	.4354	.5099	.5869	.6737	.7657	.8669	.9811	1.1150	1.2848	1.5686	1.7641
.3	.4262	.4989	.5762	.6590	.7487	.8474	.9588	1.0892	1.2544	1.5301	1.7198
.4	.4141	.4846	.5594	.6396	.7263	.8217	.9290	1.0546	1.2135	1.4776	1.6587
.5	.3997	.4675	.5394	.6163	.6993	.7905	.8929	1.0124	1.1631	1.4122	1.5821
.6	.3835	.4482	.5167	.5897	.6685	.7548	.8514	.9637	1.1045	1.3356	1.4914
.7	.3659	.4272	.4919	.5607	.6347	.7155	.8055	.9096	1.0393	1.2494	1.3890
.8	.3472	.4048	.4655	.5298	.5987	.6734	.7563	.8515	.9688	1.1556	1.2770
.9	.3278	.3816	.4380	.4976	.5610	.6295	.7049	.7905	.8947	1.0566	1.1584
1.0	.3080	.3579	.4100	.4647	.5225	.5845	.6520	.7279	.8185	.9545	1.0359
1.1	.2881	.3341	.3818	.4315	.4838	.5392	.5988	.6647	.7416	.8515	.9125
1.2	.2683	.3104	.3537	.3986	.4452	.4941	.5460	.6021	.6654	.7498	.7908
1.3	.2489	.2871	.3262	.3662	.4074	.4500	.4942	.5408	.5911	.6511	.6734
1.4	.2299	.2644	.2993	.3348	.3707	.4072	.4442	.4817	.5197	.5569	.5620
1.5	.2116	.2425	.2735	.3046	.3355	.3662	.3964	.4254	.4520	.4685	.4584
1.6	.1940	.2215	.2488	.2756	.3019	.3272	.3511	.3724	.3886	.3868	.3634
1.7	.1772	.2015	.2253	.2483	.2702	.2906	.3086	.3229	.3299	.3122	.2773
1.8	.1613	.1826	.2031	.2225	.2405	.2564	.2692	.2773	.2762	.2450	.2016
1.9	.1463	.1658	.1824	.1985	.2128	.2247	.2329	.2355	.2275	.1852	.1349
2.0	.1323	.1483	.1631	.1762	.1873	.1955	.1997	.1976	.1838	.1326	.0771
2.1	.1192	.1329	.1452	.1556	.1638	.1689	.1696	.1635	.1449	.0869	.0278
2.2	.1070	.1186	.1286	.1367	.1423	.1447	.1424	.1330	.1106	.0476	-.0138
2.3	.0957	.1054	.1134	.1195	.1229	.1229	.1180	.1059	.0706	.0141	
2.4	.0854	.0933	.0996	.1038	.1053	.1033	.0964	.0822	.0546	-.0140	
2.5	.0759	.0823	.0870	.0896	.0894	.0858	.0772	.0614	.0323		
2.6	.0671	.0722	.0756	.0768	.0753	.0703	.0605	.0434	.0133		
2.7	.0592	.0631	.0653	.0653	.0627	.0566	.0458	.0278	-.0027		
2.8	.0520	.0549	.0560	.0551	.0515	.0446	.0330	.0145			
2.9	.0454	.0474	.0477	.0460	.0417	.0341	.0220	.0033			
3.0	.0395	.0408	.0403	.0379	.0330	.0249	.0126	-.0061			
3.1	.0342	.0348	.0338	.0308	.0255	.0171	.0046				
3.2	.0295	.0295	.0280	.0246	.0189	.0104	-.0021				
3.3	.0252	.0248	.0228	.0191	.0133	.0047					
3.4	.0214	.0206	.0183	.0144	.0084	-.0002					
3.5	.0180	.0169	.0144	.0103	.0043						
3.6	.0150	.0136	.0110	.0068	.0008						
3.7	.0124	.0108	.0080	.0038	-.0022						
3.8	.0101	.0083	.0054	.0012	-.0046						
3.9	.0080	.0062	.0033	-.0009							
4.0	.0063	.0043	.0014	-.0027							
4.2	.0034	.0014	-.0015								
4.4	.0013	-.0007									
4.6	-.0002										

Table XVII

$b=.1$	Values of u . Downward Flow.						$b=.1$
x	$a=.5$	$a=1.0$	$a=1.5$	$a=2.0$	$a=2.5$	$a=3.0$	
0	.2809	.4515	.5602	.6309	.6775	.7082	
.2	.2755	.4427	.5492	.6185	.6642	.6942	
.4	.2595	.4168	.5169	.5821	.6251	.6532	
.6	.2337	.3750	.4648	.5234	.5620	.5872	
.8	.1992	.3189	.3952	.4448	.4777	.4994	
1.0	.1577	.2514	.3114	.3507	.3768	.3939	
1.2	.1105	.1749	.2170	.2449	.2637	.2763	
1.4	.0600	.0933	.1167	.1329	.1441	.1515	
1.6	.0077	.0094	.0141	.0187	.0225	.0255	
1.8	-.0438	-.0728	-.0860	-.0925	-.0956	-.0975	
2.0	-.0929	-.1509	-.1806	-.1971	-.2067	-.2123	
2.2	-.1373	-.2211	-.2655	-.2911	-.3062	-.3158	
2.4	-.1756	-.2819	-.3388	-.3717	-.3917	-.4040	
2.6	-.2060	-.3300	-.3968	-.4360	-.4597	-.4748	
2.8	-.2275	-.3646	-.4385	-.4821	-.5087	-.5254	
3.0	-.2395	-.3836	-.4618	-.5082	-.5363	-.5543	
3.2	-.2417	-.3873	-.4665	-.5134	-.5424	-.5607	

Table XVII

$b=.2$	Values of u . Downward Flow.						$b=.2$
x	$a=.5$	$a=1.0$	$a=1.5$	$a=2.0$	$a=2.5$	$a=3.0$	
0	.2066	.3349	.4169	.4699	.5044	.5267	
.2	.2027	.3284	.4088	.4608	.4946	.5164	
.4	.1913	.3098	.3855	.4345	.4664	.4869	
.6	.1733	.2804	.3488	.3930	.4214	.4403	
.8	.1497	.2419	.3006	.3386	.3632	.3790	
1.0	.1220	.1963	.2433	.2736	.2932	.3057	
1.2	.0912	.1455	.1793	.2008	.2146	.2234	
1.4	.0589	.0918	.1112	.1232	.1307	.1354	
1.6	.0262	.0372	.0418	.0439	.0448	.0452	
1.8	-.0053	-.0166	-.0261	-.0340	-.0397	-.0435	
2.0	-.0348	-.0658	-.0899	-.1073	-.1195	-.1274	
2.2	-.0609	-.1103	-.1471	-.1733	-.1912	-.2028	
2.4	-.0831	-.1480	-.1956	-.2293	-.2524	-.2673	
2.6	-.1005	-.1776	-.2338	-.2734	-.3004	-.3179	
2.8	-.1129	-.1985	-.2606	-.3044	-.3343	-.3536	
3.0	-.1200	-.2103	-.2756	-.3216	-.3529	-.3731	
3.2	-.1220	-.2132	-.2789	-.3252	-.3568	-.3772	

Table XVII

$b=.3$	Values of u . Downward Flow.						$b=.3$
x	$a=.5$	$a=1.0$	$a=1.5$	$a=2.0$	$a=2.5$	$a=3.0$	
0	.1475	.2398	.2985	.3359	.3597	.3747	
.2	.1448	.2353	.2928	.3295	.3528	.3675	
.4	.1369	.2223	.2767	.3113	.3333	.3472	
.6	.1247	.2024	.2513	.2832	.3032	.3158	
.8	.1090	.1769	.2198	.2472	.2646	.2755	
1.0	.0909	.1473	.1827	.2052	.2195	.2285	
1.2	.0712	.1150	.1421	.1594	.1703	.1771	
1.4	.0509	.0814	.1001	.1117	.1189	.1233	
1.6	.0308	.0482	.0581	.0642	.0678	.0700	
1.8	.0116	.0162	.0180	.0185	.0186	.0184	
2.0	-.0060	-.0130	-.0191	-.0234	-.0267	-.0288	
2.2	-.0216	-.0390	-.0517	-.0607	-.0668	-.0709	
2.4	-.0346	-.0606	-.0792	-.0918	-.1004	-.1059	
2.6	-.0450	-.0779	-.1008	-.1166	-.1270	-.1338	
2.8	-.0525	-.0902	-.1165	-.1341	-.1459	-.1535	
3.0	-.0573	-.0980	-.1259	-.1450	-.1575	-.1656	
3.2	-.0593	-.1010	-.1298	-.1489	-.1617	-.1698	
3.4	-.0589	-.1001	-.1281	-.1471	-.1595	-.1675	

Table XVII

$b=.4$	Values of u . Downward Flow.						$b=.4$
x	$a=.5$	$a=1.0$	$a=1.5$	$a=2.0$	$a=2.5$	$a=3.0$	
0	.1007	.1634	.2024	.2266	.2416	.2507	
.2	.0988	.1603	.1986	.2223	.2370	.2460	
.4	.0935	.1517	.1880	.2104	.2243	.2329	
.6	.0856	.1388	.1719	.1924	.2051	.2130	
.8	.0756	.1225	.1518	.1698	.1810	.1879	
1.0	.0643	.1041	.1288	.1440	.1534	.1593	
1.2	.0522	.0842	.1042	.1164	.1240	.1286	
1.4	.0400	.0642	.0791	.0882	.0938	.0973	
1.6	.0279	.0444	.0545	.0606	.0644	.0666	
1.8	.0167	.0259	.0313	.0345	.0364	.0375	
2.0	.0063	.0089	.0101	.0107	.0110	.0111	
2.2	-.0027	-.0059	-.0084	-.0102	-.0114	-.0122	
2.4	-.0104	-.0165	-.0241	-.0278	-.0302	-.0318	
2.6	-.0165	-.0285	-.0366	-.0419	-.0453	-.0474	
2.8	-.0212	-.0361	-.0460	-.0524	-.0565	-.0592	
3.0	-.0244	-.0412	-.0523	-.0595	-.0641	-.0669	
3.2	-.0262	-.0441	-.0558	-.0633	-.0681	-.0713	
3.4	-.0268	-.0449	-.0567	-.0643	-.0692	-.0721	

Table XVII

x	$a=.5$	$a=1.0$	$a=1.5$	$a=2.0$	$a=2.5$	$a=3.0$
0	.0642	.1031	.1266	.1405	.1487	.1535
.2	.0630	.1012	.1242	.1379	.1459	.1506
.4	.0597	.0960	.1178	.1308	.1384	.1428
.6	.0549	.0882	.1082	.1202	.1272	.1312
.8	.0489	.0786	.0964	.1071	.1133	.1169
1.0	.0423	.0679	.0832	.0924	.0978	.1008
1.2	.0352	.0566	.0693	.0770	.0814	.0839
1.4	.0283	.0452	.0553	.0614	.0650	.0669
1.6	.0214	.0343	.0418	.0464	.0490	.0504
1.8	.0152	.0239	.0291	.0322	.0341	.0350
2.0	.0093	.0147	.0177	.0195	.0205	.0210
2.2	.0044	.0084	.0075	.0082	.0086	.0087
2.4	-.0001	-.0005	-.0010	-.0013	-.0015	-.0017
2.6	-.0035	-.0063	-.0081	-.0092	-.0098	-.0103
2.8	-.0064	-.0107	-.0135	-.0152	-.0162	-.0168
3.0	-.0083	-.0140	-.0176	-.0197	-.0209	-.0218
3.2	-.0098	-.0161	-.0201	-.0226	-.0240	-.0248
3.4	-.0105	-.0174	-.0217	-.0242	-.0257	-.0267
3.6	-.0108	-.0176	-.0219	-.0246	-.0261	-.0270

Table XVII

x	$a=.5$	$a=1.0$	$a=1.5$	$a=2.0$	$a=2.5$	$a=3.0$
0	.0366	.0577	.0697	.0764	.0800	.0820
.2	.0359	.0566	.0684	.0750	.0785	.0805
.4	.0341	.0539	.0650	.0712	.0746	.0764
.6	.0315	.0497	.0600	.0657	.0688	.0705
.8	.0283	.0446	.0539	.0590	.0618	.0633
1.0	.0248	.0391	.0472	.0517	.0541	.0553
1.2	.0211	.0333	.0402	.0440	.0461	.0472
1.4	.0175	.0276	.0333	.0364	.0381	.0391
1.6	.0140	.0221	.0266	.0291	.0305	.0312
1.8	.0108	.0170	.0204	.0223	.0234	.0240
2.0	.0078	.0124	.0148	.0161	.0169	.0173
2.2	.0053	.0083	.0098	.0107	.0113	.0115
2.4	.0030	.0048	.0056	.0060	.0063	.0064
2.6	.0012	.0018	.0020	.0022	.0023	.0023
2.8	-.0004	-.0005	-.0008	-.0010	-.0010	-.0011
3.0	-.0015	-.0024	-.0031	-.0034	-.0035	-.0037
3.2	-.0025	-.0037	-.0047	-.0052	-.0054	-.0057
3.4	-.0029	-.0047	-.0059	-.0064	-.0067	-.0070
3.6	-.0033	-.0052	-.0065	-.0072	-.0075	-.0078
3.8	-.0035	-.0056	-.0068	-.0075	-.0078	-.0081
4.0	-.0037	-.0055	-.0068	-.0075	-.0078	-.0081

Table XVII

$b=.7$	Values of u . Downward Flow.					$b=.7$
x	$a=.5$	$a=1.0$	$a=1.5$	$a=2.0$	$a=2.5$	$a=3.0$
0	.0171	.0261	.0307	.0330	.0342	.0348
.2	.0168	.0256	.0301	.0324	.0336	.0342
.4	.0160	.0244	.0286	.0308	.0320	.0325
.6	.0148	.0226	.0265	.0285	.0296	.0301
.8	.0134	.0205	.0240	.0258	.0268	.0273
1.0	.0119	.0181	.0212	.0228	.0237	.0242
1.2	.0108	.0157	.0184	.0198	.0206	.0210
1.4	.0088	.0133	.0156	.0168	.0175	.0179
1.6	.0073	.0111	.0130	.0140	.0146	.0149
1.8	.0060	.0090	.0105	.0113	.0119	.0121
2.0	.0047	.0071	.0083	.0090	.0094	.0096
2.2	.0036	.0054	.0063	.0068	.0071	.0073
2.4	.0026	.0040	.0046	.0050	.0052	.0054
2.6	.0018	.0027	.0031	.0034	.0036	.0037
2.8	.0011	.0017	.0019	.0021	.0023	.0023
3.0	.0006	.0008	.0009	.0010	.0012	.0012
3.2	.0001	.0002	.0002	.0002	.0003	.0003
3.4	-.0002	-.0003	-.0004	-.0005	-.0005	-.0004
3.6	-.0005	-.0007	-.0008	-.0010	-.0009	-.0009
3.8	-.0006	-.0009	-.0011	-.0013	-.0011	-.0013
4.0	-.0007	-.0011	-.0013	-.0015	-.0013	-.0015
4.2	-.0008	-.0012	-.0014	-.0016	-.0015	-.0016
4.4	-.0008	-.0012	-.0014	-.0016	-.0015	-.0016

Table XVII

$b=.8$	Values of u . Downward Flow.					$b=.8$
x	$a=.5$	$a=1.0$	$a=1.5$	$a=2.0$	$a=2.5$	$a=3.0$
0	.0052	.0076	.0086	.0090	.0092	.0093
.2	.0051	.0075	.0085	.0088	.0090	.0091
.4	.0049	.0071	.0081	.0084	.0086	.0087
.6	.0046	.0066	.0075	.0078	.0080	.0081
.8	.0042	.0060	.0068	.0071	.0073	.0074
1.0	.0038	.0054	.0061	.0064	.0065	.0066
1.2	.0033	.0047	.0053	.0056	.0057	.0058
1.4	.0029	.0041	.0046	.0049	.0049	.0050
1.6	.0025	.0035	.0039	.0042	.0042	.0043
1.8	.0021	.0029	.0033	.0035	.0035	.0036
2.0	.0017	.0024	.0027	.0029	.0029	.0030
2.2	.0014	.0019	.0022	.0024	.0023	.0025
2.4	.0011	.0015	.0017	.0019	.0019	.0020
2.6	.0009	.0012	.0013	.0015	.0014	.0015
2.8	.0007	.0009	.0010	.0011	.0011	.0012
3.0	.0005	.0007	.0007	.0008	.0008	.0009
3.2	.0004	.0005	.0005	.0006	.0006	.0007
3.4	.0003	.0003	.0003	.0004	.0004	.0005
3.6	.0002	.0002	.0002	.0002	.0003	.0003
3.8	.0001	.0001	.0001	.0001	.0002	.0002
4.0	.0001	.0000	.0000	.0000	.0001	.0001
4.2	.0000	.0000	.0000	-.0001	.0000	.0000
4.4	.0000	-.0001	-.0001	-.0001	.0000	.0000
4.6	.0000	-.0001	-.0001	-.0002	.0000	.0000
4.8	.0000	-.0001	-.0001	-.0002	-.0001	.0000