

CHAPTER III

NUMERICAL RESULTS

In this chapter we will solve equation (2.19) and (2.19'). Since these two equations are simultaneous transcendental equations we will have to solve them numerically. We will be using the Newton-Raphson method (22) for solving simultaneous equations.

To begin, let us consider the case of two equations with two unknowns. We write the given equations as

$$P(x, m) = 0 \quad (3.1)$$

$$G(x, m) = 0 \quad (3.2)$$

Now if x_0, m_0 be approximate values of a pair of roots and h, k are corrections, then

$$x = x_0 + h$$

$$m = m_0 + k$$

Substituting these into (3.1) and (3.2), we get

$$P(x_0 + h, m_0 + k) = 0 \quad (3.3)$$

$$G(x_0 + h, m_0 + k) = 0 \quad (3.4)$$

Expanding (3.3) and (3.4) by Taylor's theorem for a function of two variables, we have

$$P(x_0 + h, m_0 + k) = P(x_0, m_0) + h \left(\frac{\partial P}{\partial x} \right)_0 + k \left(\frac{\partial P}{\partial m} \right)_0 + \text{terms in higher powers of } h$$

and k

$$= 0 \quad (3.5)$$

$$\begin{aligned} G(x_0 + h, m_0 + k) &= G(x_0, m_0) + h \left(\frac{\partial G}{\partial x} \right)_0 + k \left(\frac{\partial G}{\partial m} \right)_0 \\ &\quad + \text{terms in higher powers of } h \\ &\quad \text{and } k \end{aligned}$$

$$= 0 \quad (3.6)$$

Now since h and k are relatively small, we can neglect their squares, products and higher powers. Equation (3.5) and (3.6) become simply

$$P(x_0, m_0) + h \left(\frac{\partial P}{\partial x} \right)_0 + k \left(\frac{\partial P}{\partial m} \right)_0 = 0 \quad (3.7)$$

$$G(x_0, m_0) + h \left(\frac{\partial G}{\partial x} \right)_0 + k \left(\frac{\partial G}{\partial m} \right)_0 = 0 \quad (3.8)$$

Solving these by determinants, we find the first corrections to be

$$h_1 = \frac{\begin{vmatrix} -P(x_0, m_0) & \left(\frac{\partial P}{\partial m} \right)_0 \\ -G(x_0, m_0) & \left(\frac{\partial G}{\partial m} \right)_0 \end{vmatrix}}{D} \quad (3.9)$$

$$k_1 = \frac{\begin{vmatrix} \left(\frac{\partial P}{\partial x} \right)_0 & -P(x_0, m_0) \\ \left(\frac{\partial G}{\partial x} \right)_0 & -G(x_0, m_0) \end{vmatrix}}{D} \quad (3.10)$$

$$\text{where } D = \begin{vmatrix} \left(\frac{\partial P}{\partial x} \right)_0 & \left(\frac{\partial P}{\partial m} \right)_0 \\ \left(\frac{\partial G}{\partial x} \right)_0 & \left(\frac{\partial G}{\partial m} \right)_0 \end{vmatrix} \quad (3.11)$$

Additional corrections can be found by repeated applications of these formulas with the improved values of x and m substituted at each step.

The notation $\left(\frac{\partial P}{\partial x}\right)_0$ means the value of $\frac{\partial P}{\partial x}$ when x_0 and m_0 are substituted for x and m . Similarly, $\left(\frac{\partial P}{\partial x}\right)_1$ means the value of $\frac{\partial P}{\partial x}$ when $x = x_1$, $m = m_1$ and so on.

In our calculation

$$P(x,m) = [cq_1^4 + (1-c)q_2^4] - [1 + \frac{1}{2}(c + (1-c)a^2)x] \\ [cq_1^2 + (1-c)q_2^2] + [8(c + (1-c)a^2)x \\ + 5(c + (1-c)a^2)^2x^2][cq_1^2 + (1-c)q_2^2]^2$$

$$G(x,m) = m - cq_1 - (1-c)q_2$$

$$\text{where } q_1 = \tanh(mz x)$$

$$q_2 = \tanh(mz x a)$$

$$\frac{\partial P}{\partial x} = 4cq_1^3 mz \cdot \text{sech}^2(mz x) \\ + 4(1-c)q_2^3 m z a \cdot \text{sech}^2(mz a x) \\ - [1 + \frac{1}{2}(c + (1-c)a^2)x] \\ \cdot [2cq_1mz \cdot \text{sech}^2(mz x) \\ + 2(1-c)q_2mza \cdot \text{sech}^2(mz a x)] \\ - [cq_1^2 + (1-c)q_2^2] [\frac{1}{2}(c + (1-c)a^2) \\ + 2[8(c + (1-c)a^2)x + 5(c + (1-c)a^2)^2x^2] \\ \cdot [cq_1^2 + (1-c)q_2^2] [2cq_1mz \cdot \text{sech}^2(mzx) \\ + 2(1-c)q_2mza \cdot \text{sech}^2(mzax)] \\ + [cq_1^2 + (1-c)q_2^2]^2 [8(c + (1-c)a^2)$$

$$\begin{aligned}
& + 10 (c + (1 - c)a^2)^2 x] \\
\frac{\partial P}{\partial m} & = 4cq_1^3 zx \cdot \text{sech}^2(mzx) + 4(1 - c)q_2^3 azx \cdot \text{sech}^2(mzax) \\
& - [1 + \frac{1}{2}(c + (1 - c)a^2)x][2cq_1 zx \cdot \text{sech}^2(mzx) \\
& + 2(1 - c)q_2 azx \cdot \text{sech}^2(mzax)] + 2[8(c + (1 - c)a^2)x \\
& + 5(c + (1 - c)a^2)^2 x^2][cq_1^2 + (1 - c)q_2^2] \\
& [2cq_1 zx \cdot \text{sech}^2(mzx) + 2(1 - c)q_2 azx \cdot \text{sech}^2(mzax)] \\
\frac{\partial G}{\partial x} & = - czm \cdot \text{sech}^2(mzx) - (1 - c)azm \cdot \text{sech}^2(mzax) \\
\frac{\partial G}{\partial m} & = 1 - czx \cdot \text{sech}^2(mzx) - (1 - c)azx \cdot \text{sech}^2(mzax)
\end{aligned}$$

To use the Newton-Raphson method we must have the approximated values x_0 and m_0 . To obtain the initial values we look at our two equations (2.19) and (2.19) and set $c = 0$ for each value of z and a .

For $c = 0$, Eq. (2.19) and (2.19) can be written as

$$m = \frac{\tanh^{-1}(P)}{zxa} \quad (3.12)$$

$$\text{where } P = \frac{1 + \frac{1}{2}a^2x}{1 + 8a^2x + 5a^4x^2}$$

$$x = \frac{\tanh^{-1}(m)}{azm} \quad (3.13)$$

By plotting these two equations together we find that they intersect at the points (x_0, m_0) . (See Figures 1-20). These two points are then used in Newton-Raphson method to calculate the exact value of x and m . As c changed the nearest approximate value x_0, m_0 are taken to be the exact value of x and m for the previous values of c .

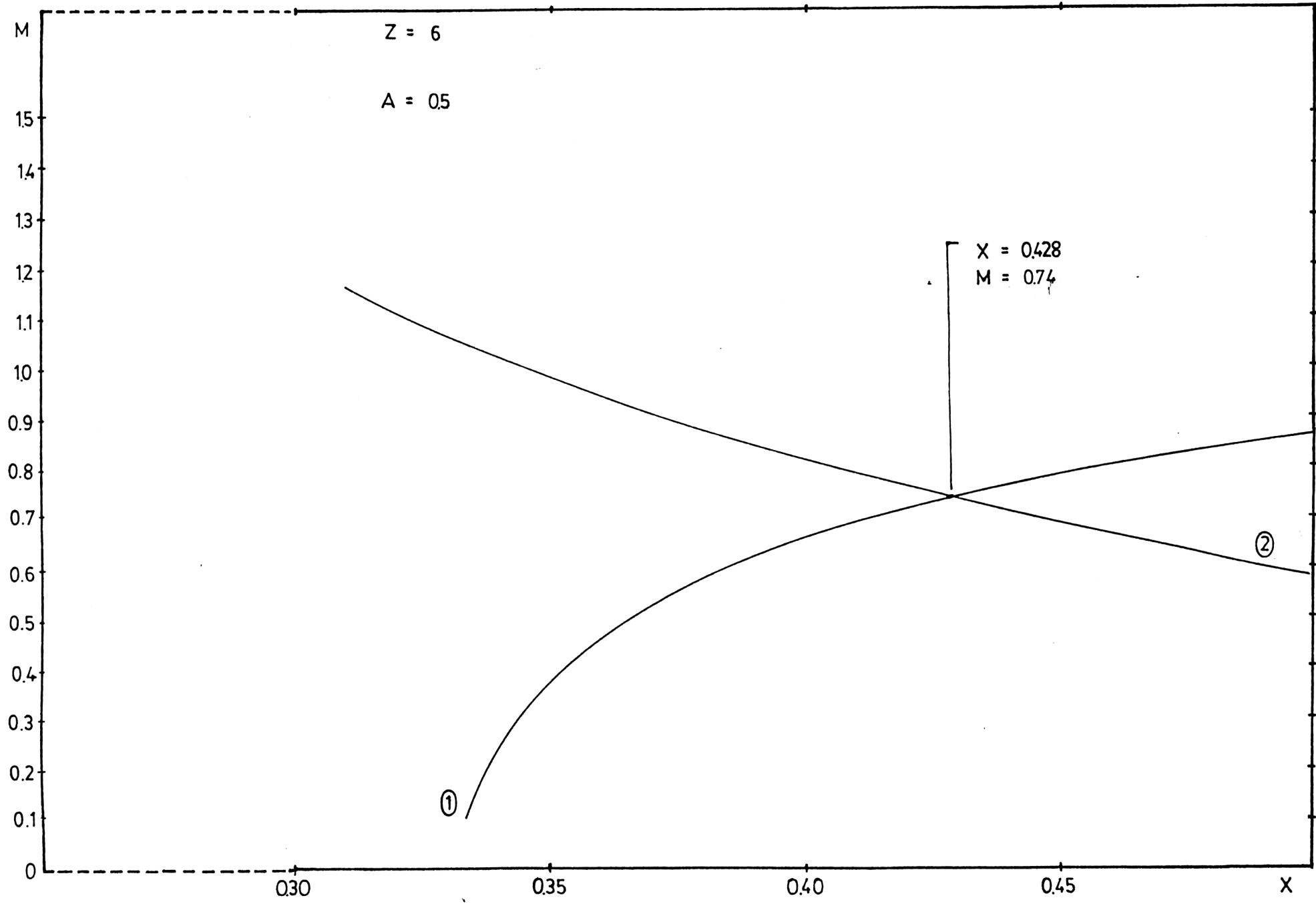


Fig.1

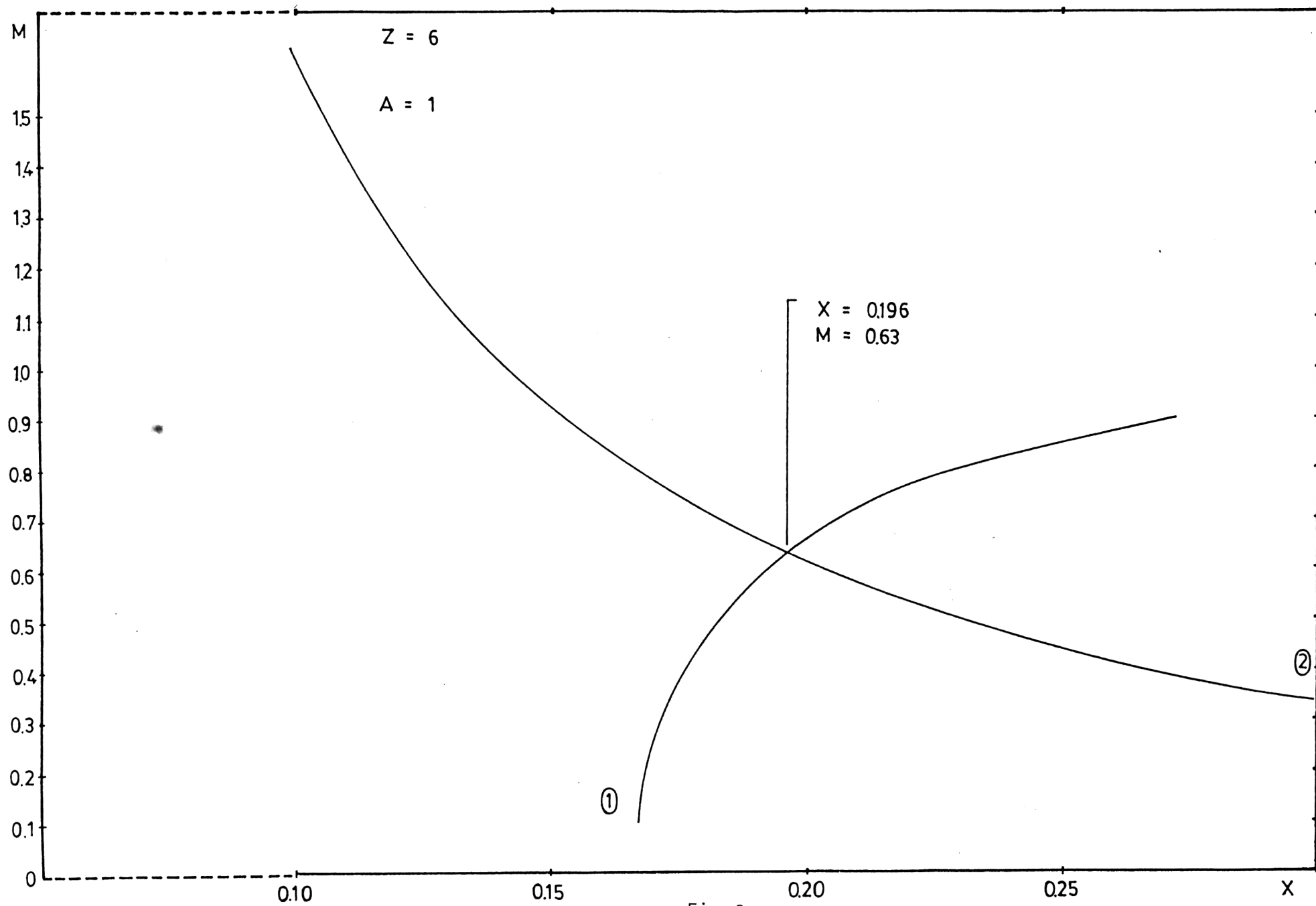


Fig. 2

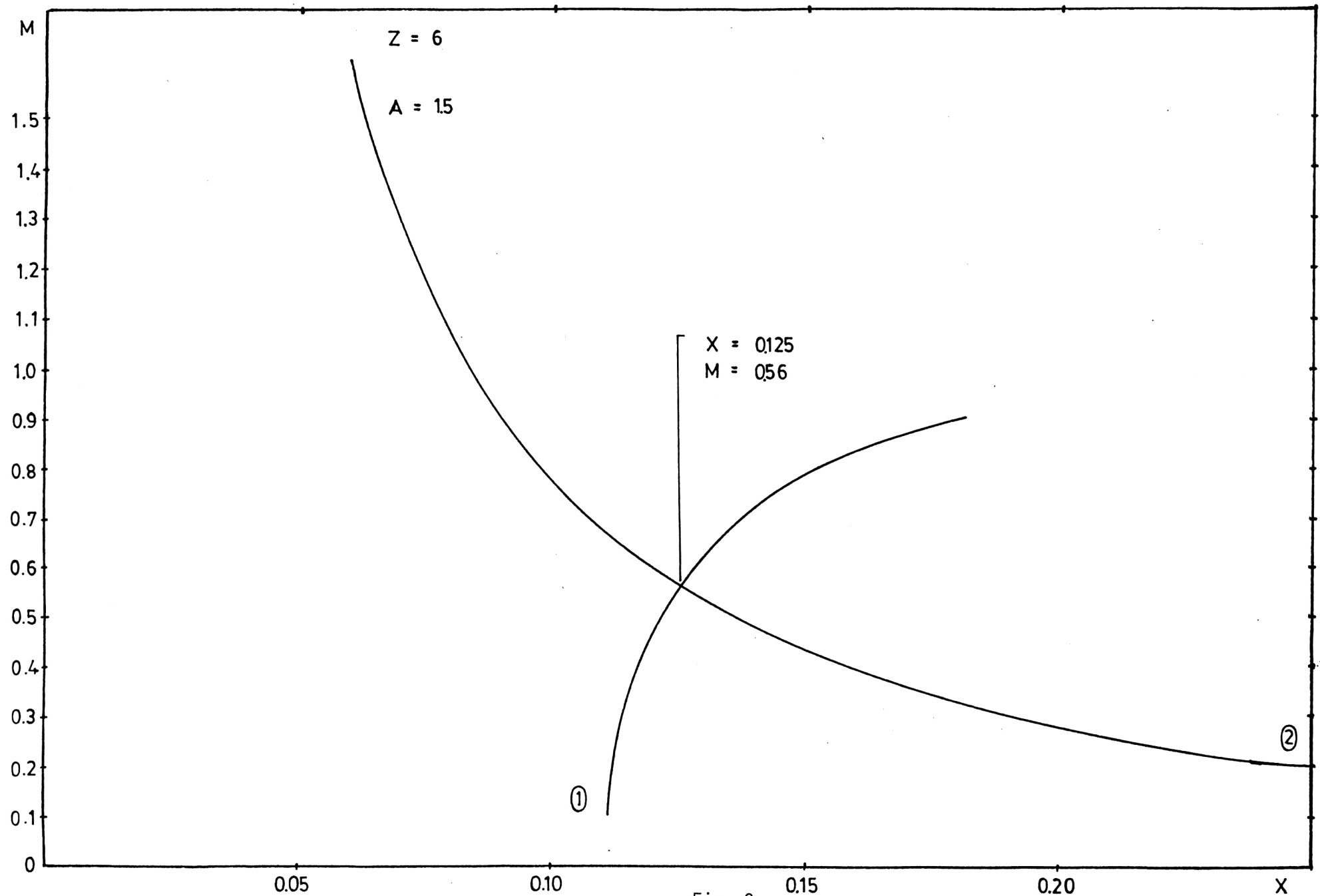


Fig. 3

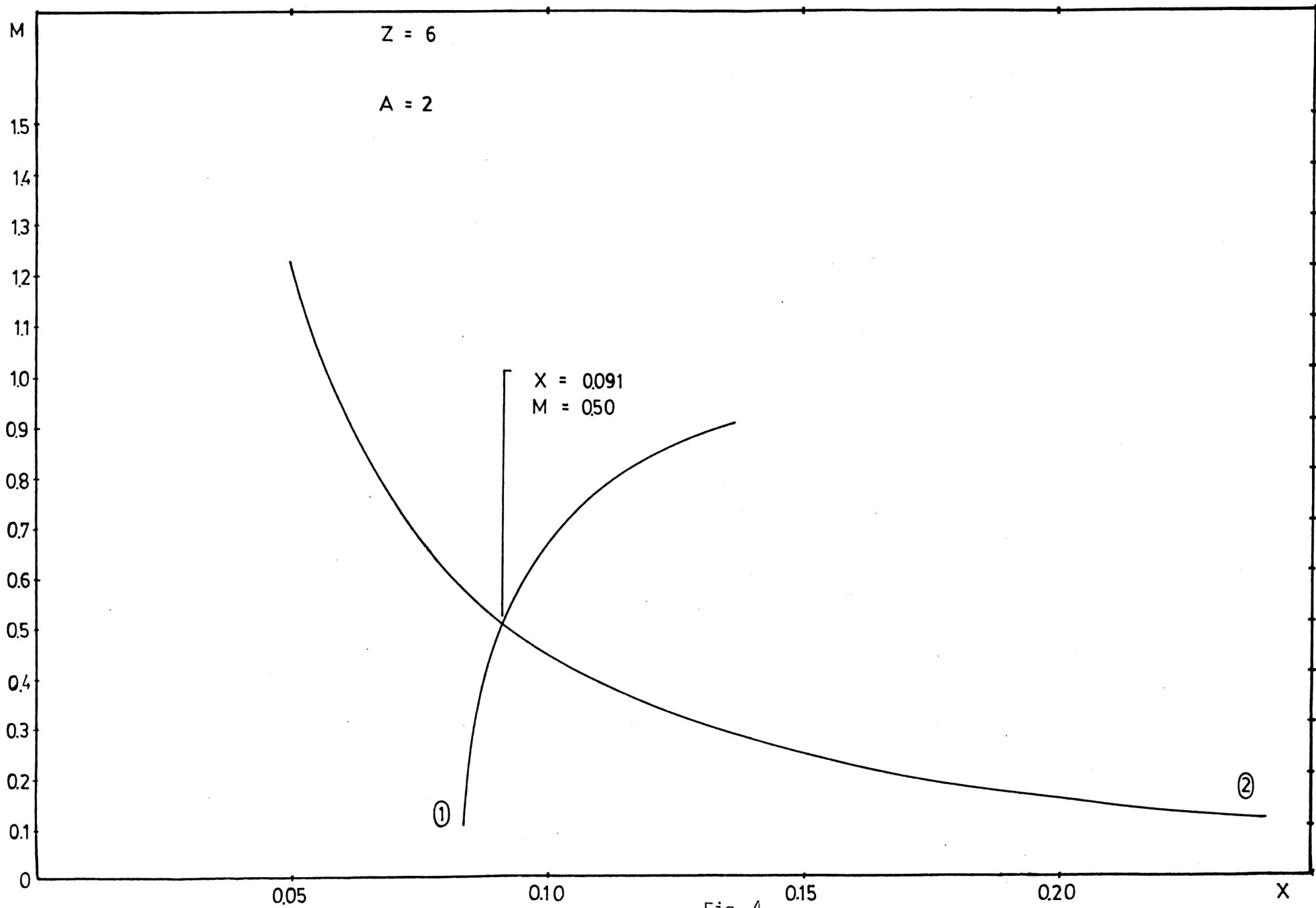


Fig. 4

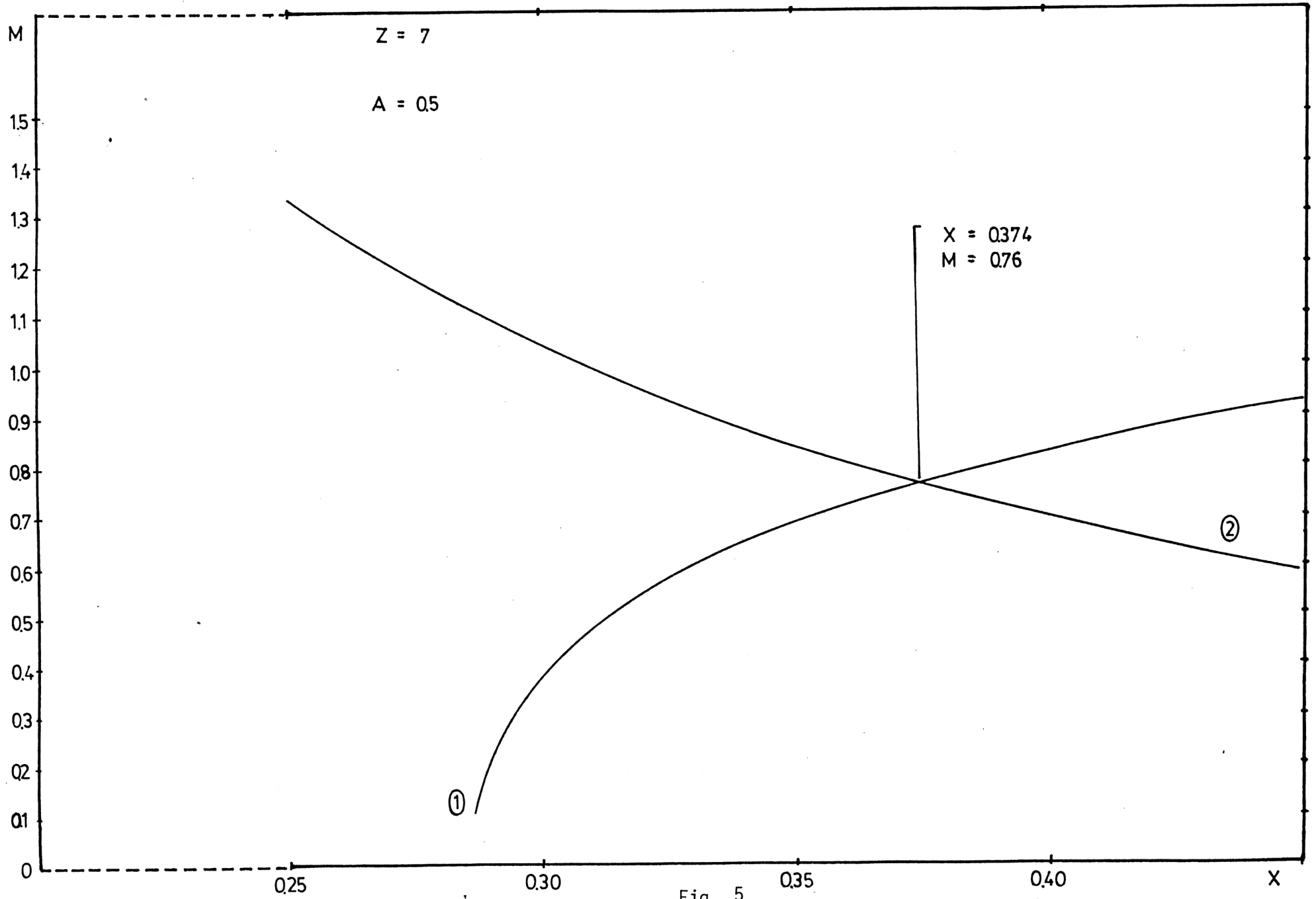


Fig. 5

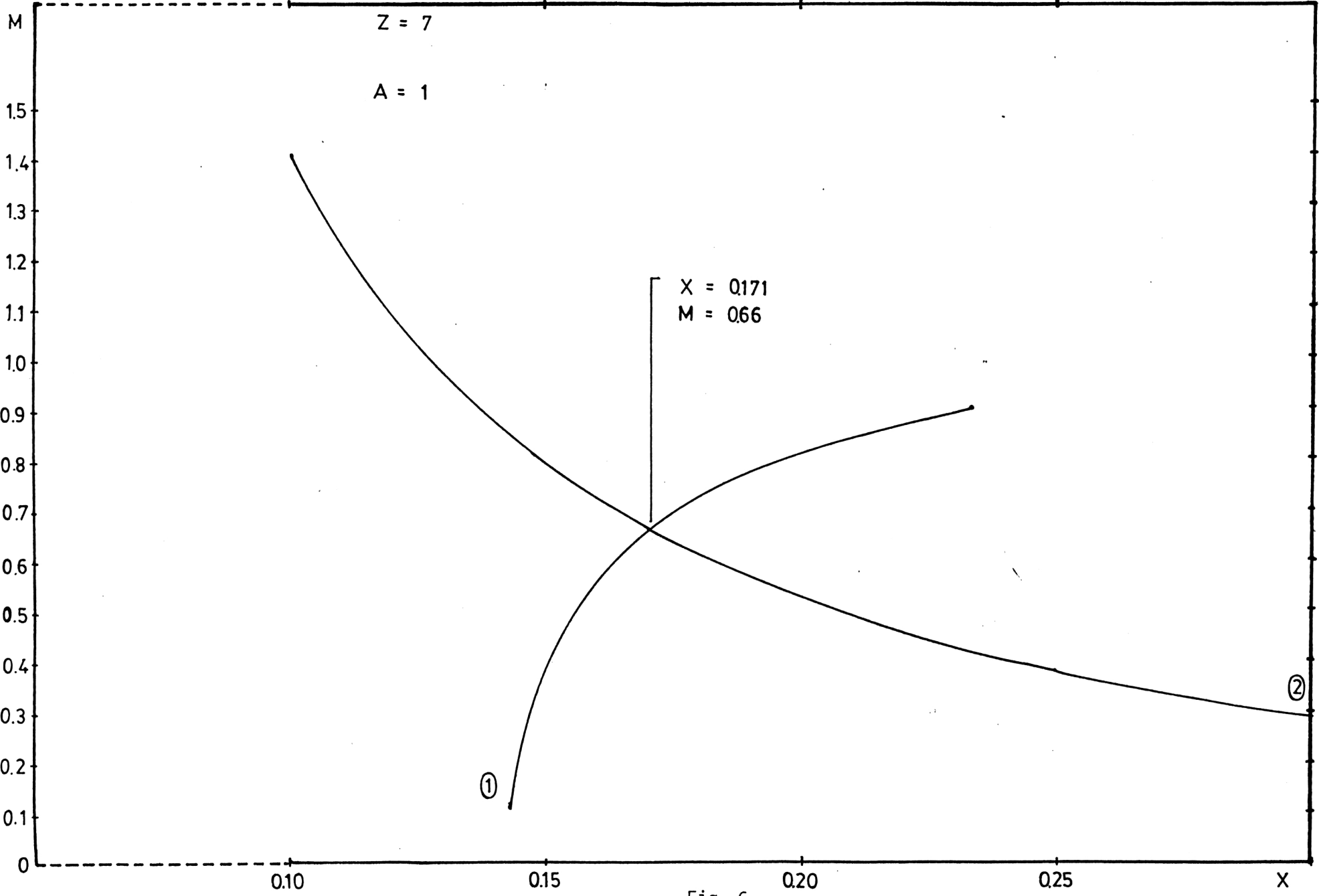


Fig. 6

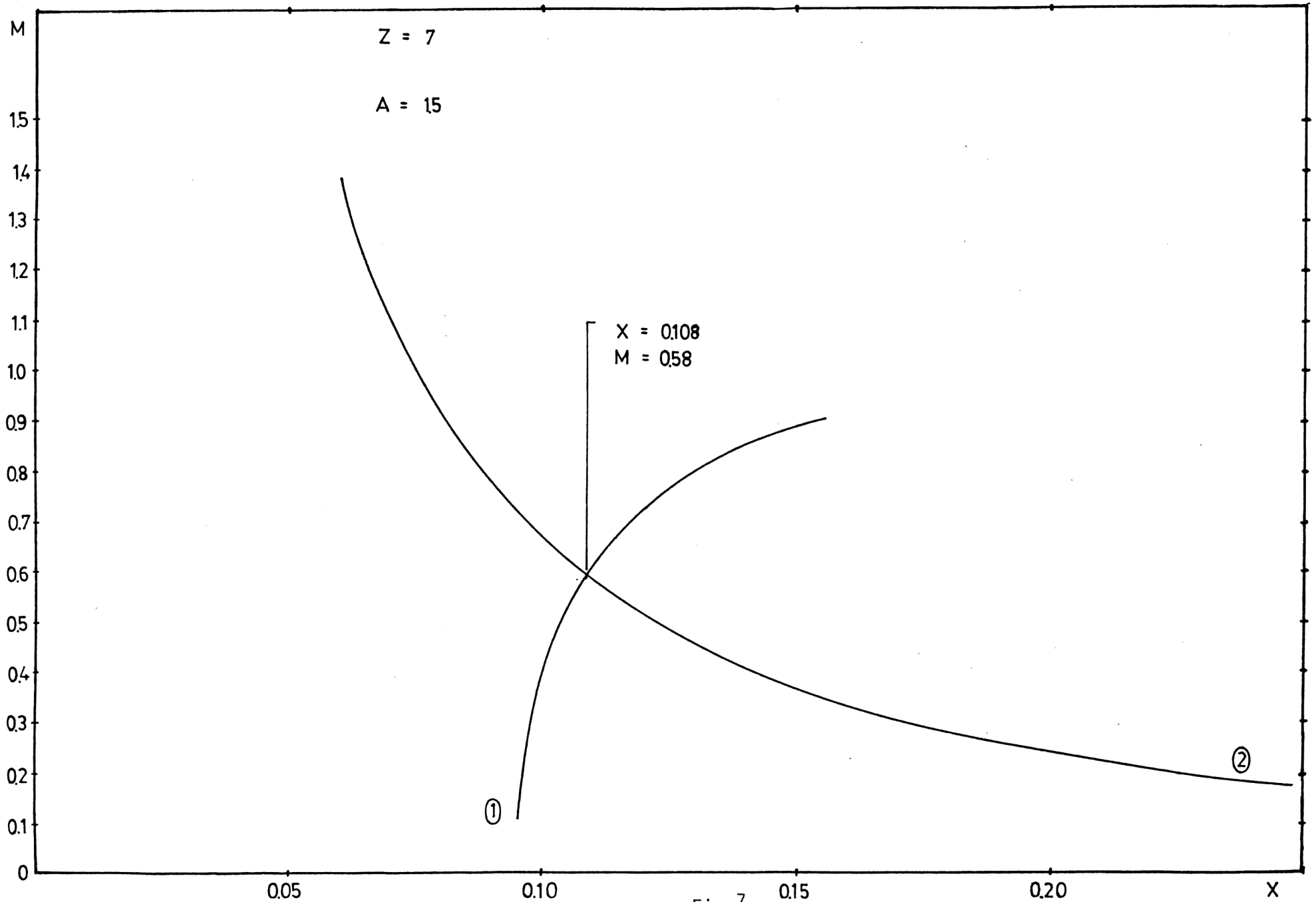


Fig. 7

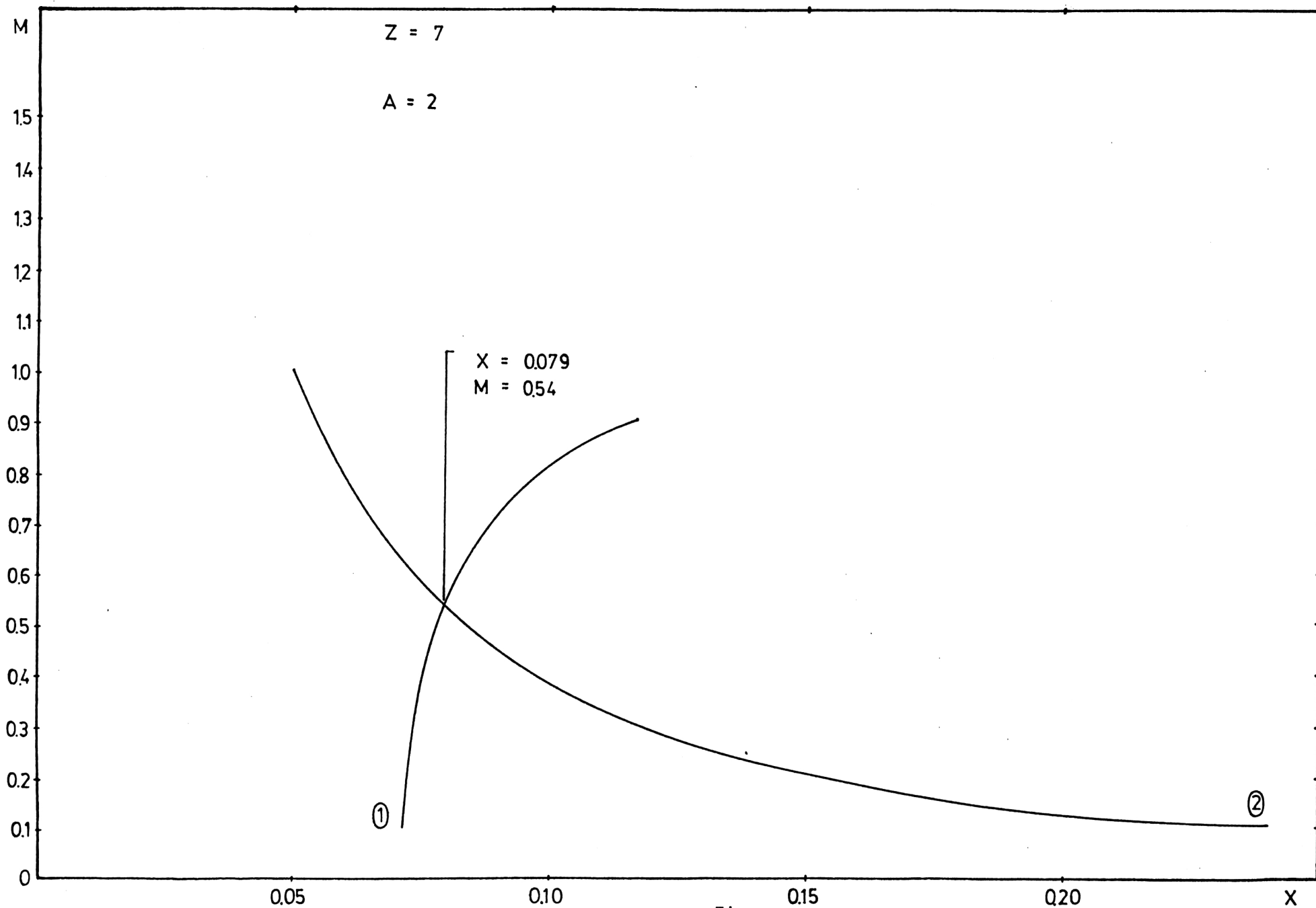


Fig. 8

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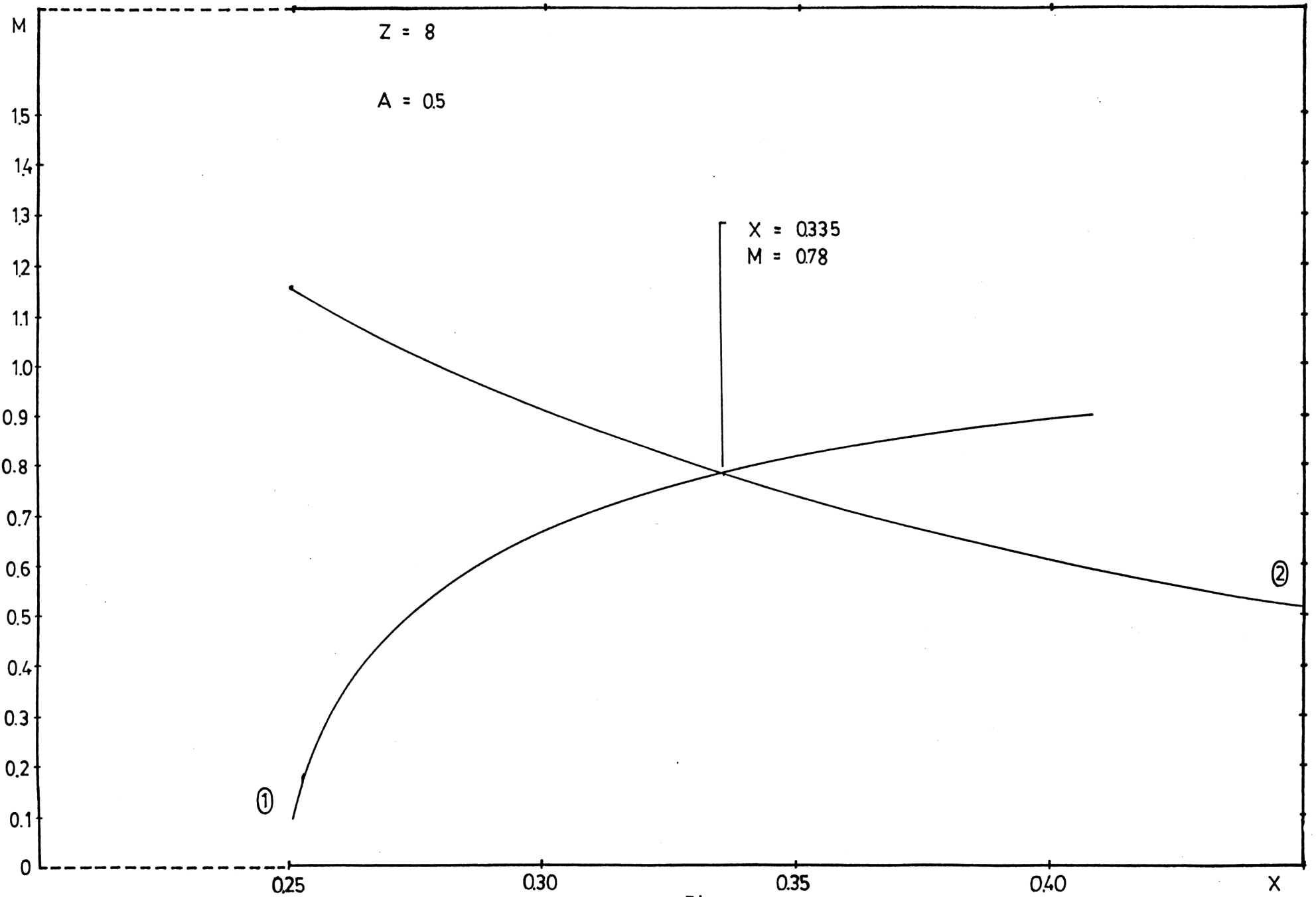


Fig. 9

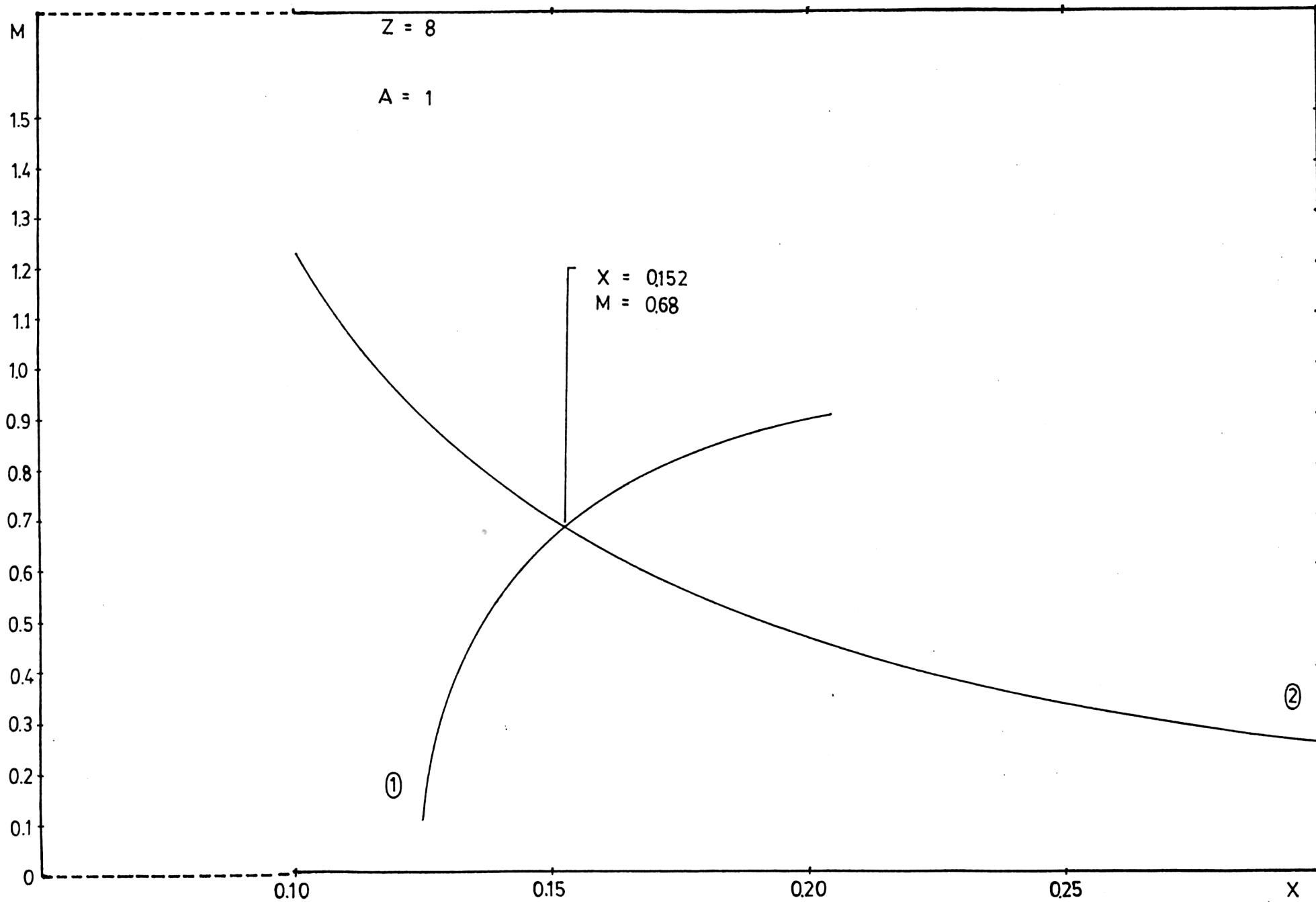


Fig. 10

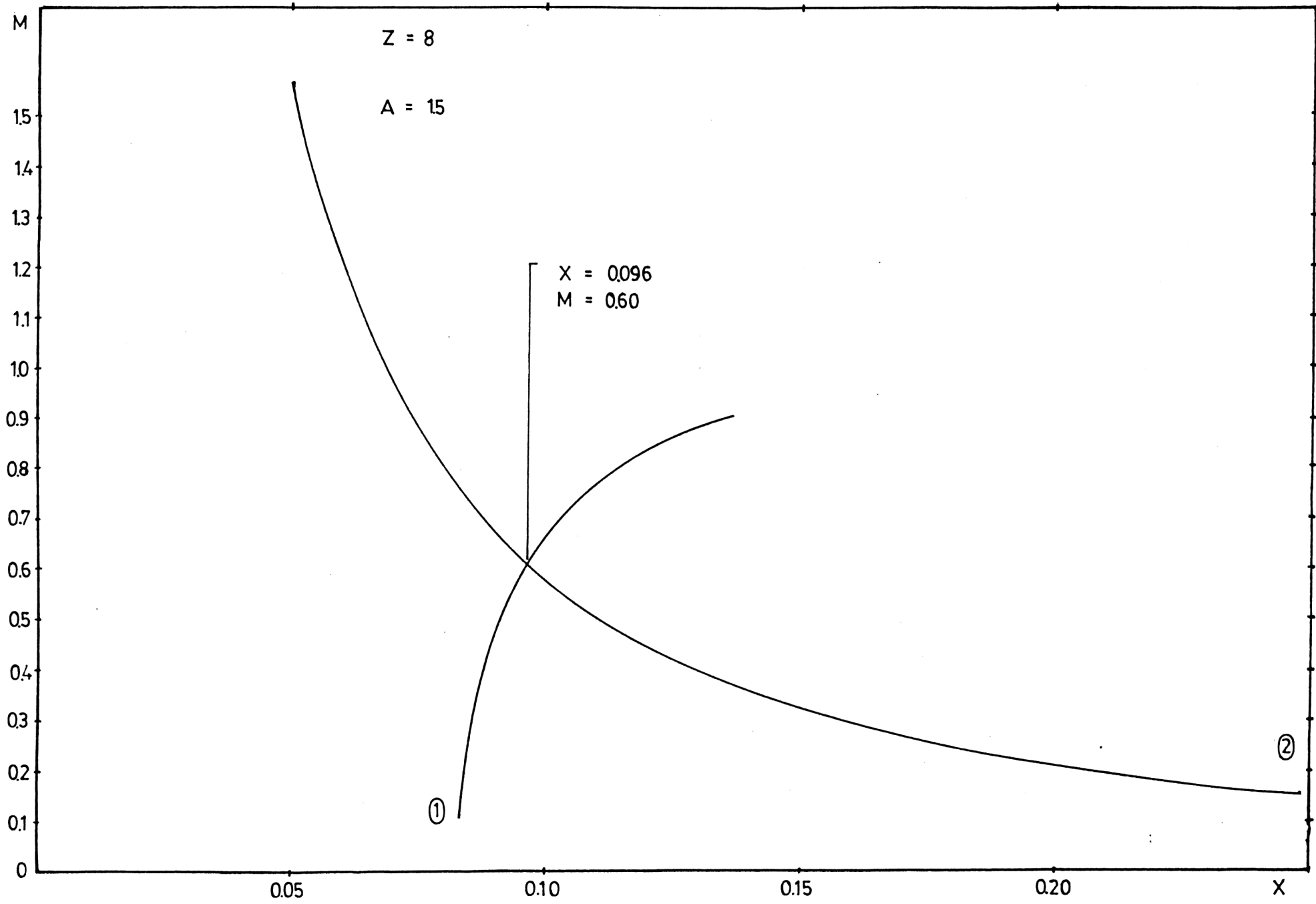


Fig.11

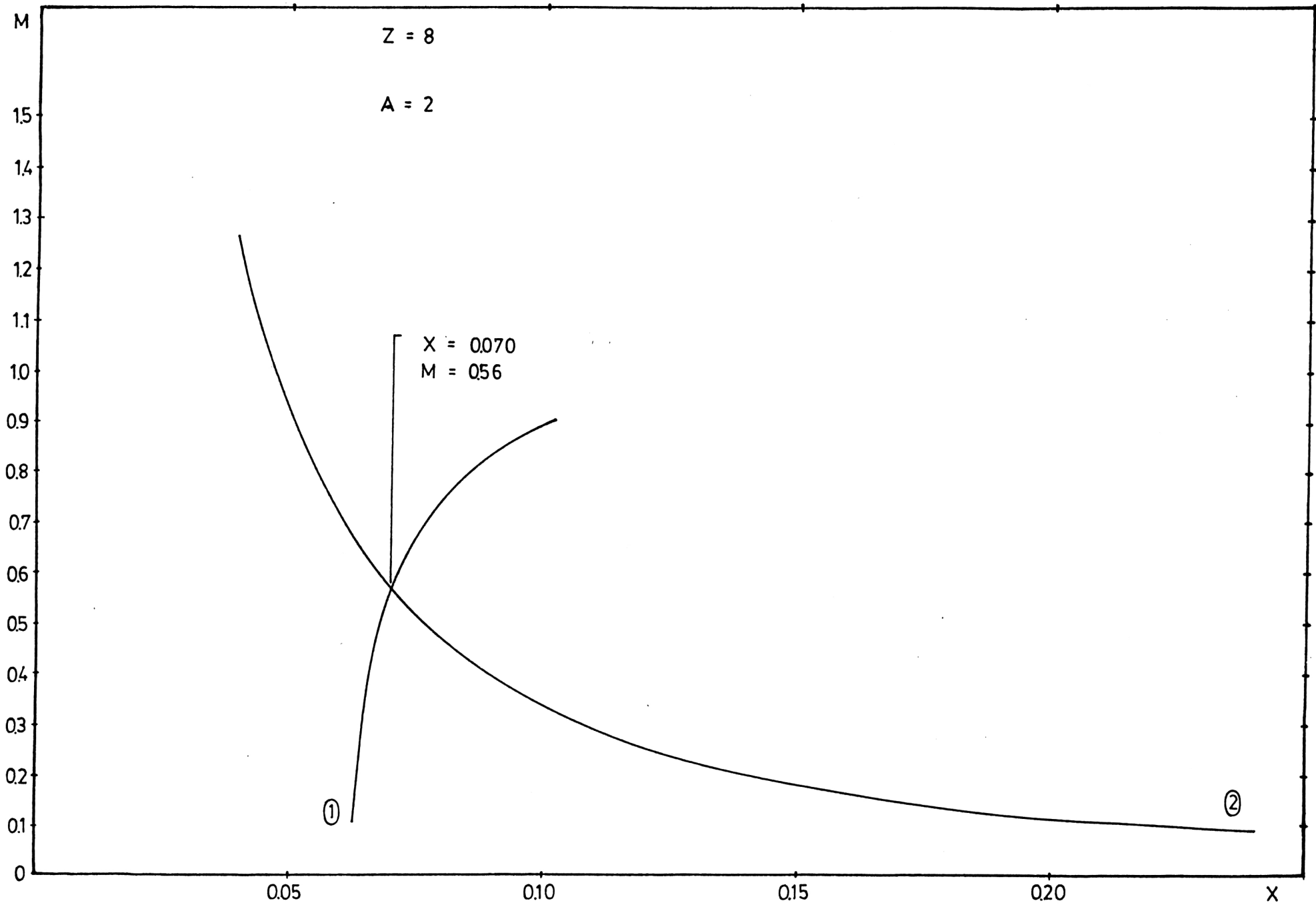


Fig.12

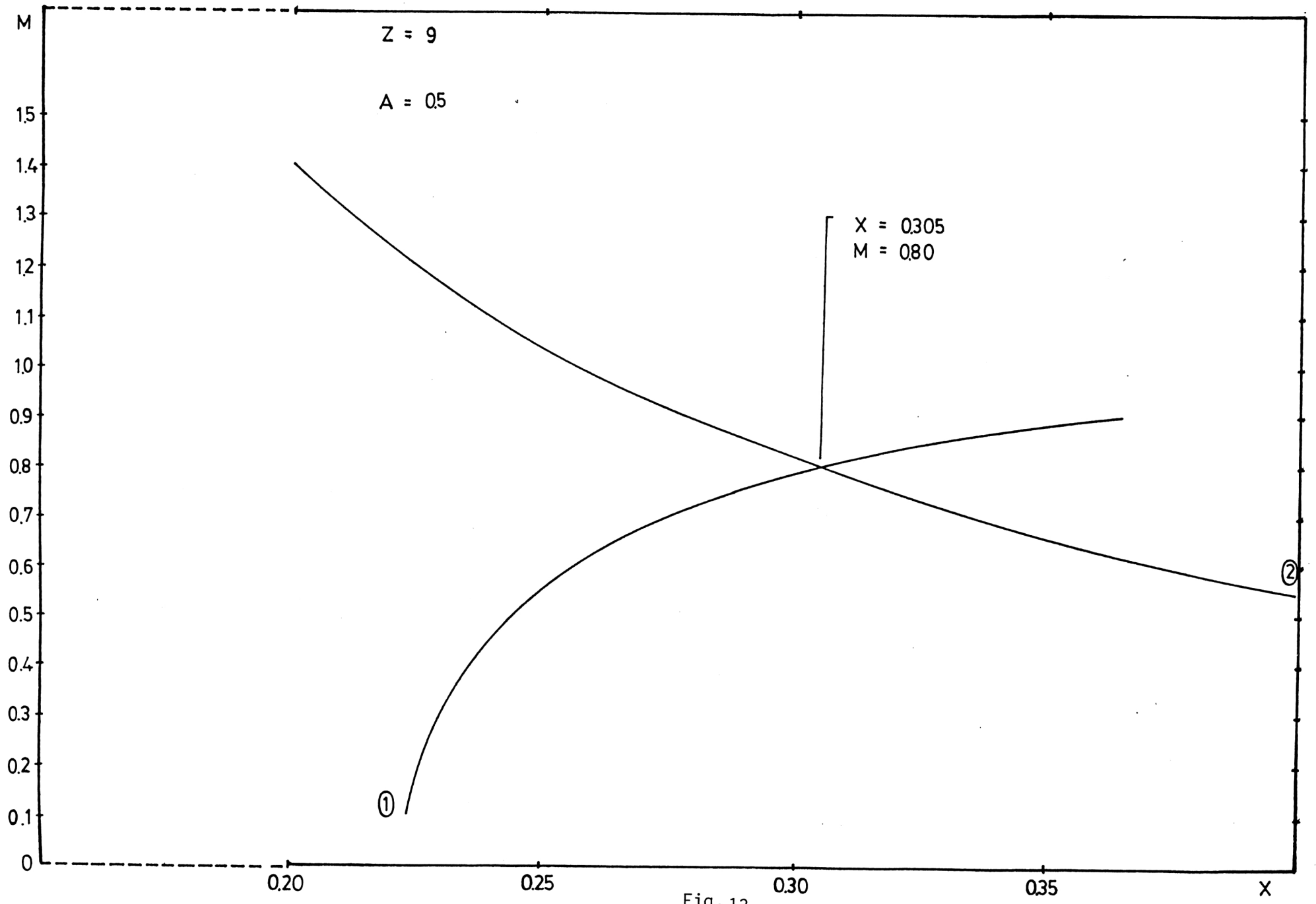


Fig. 13

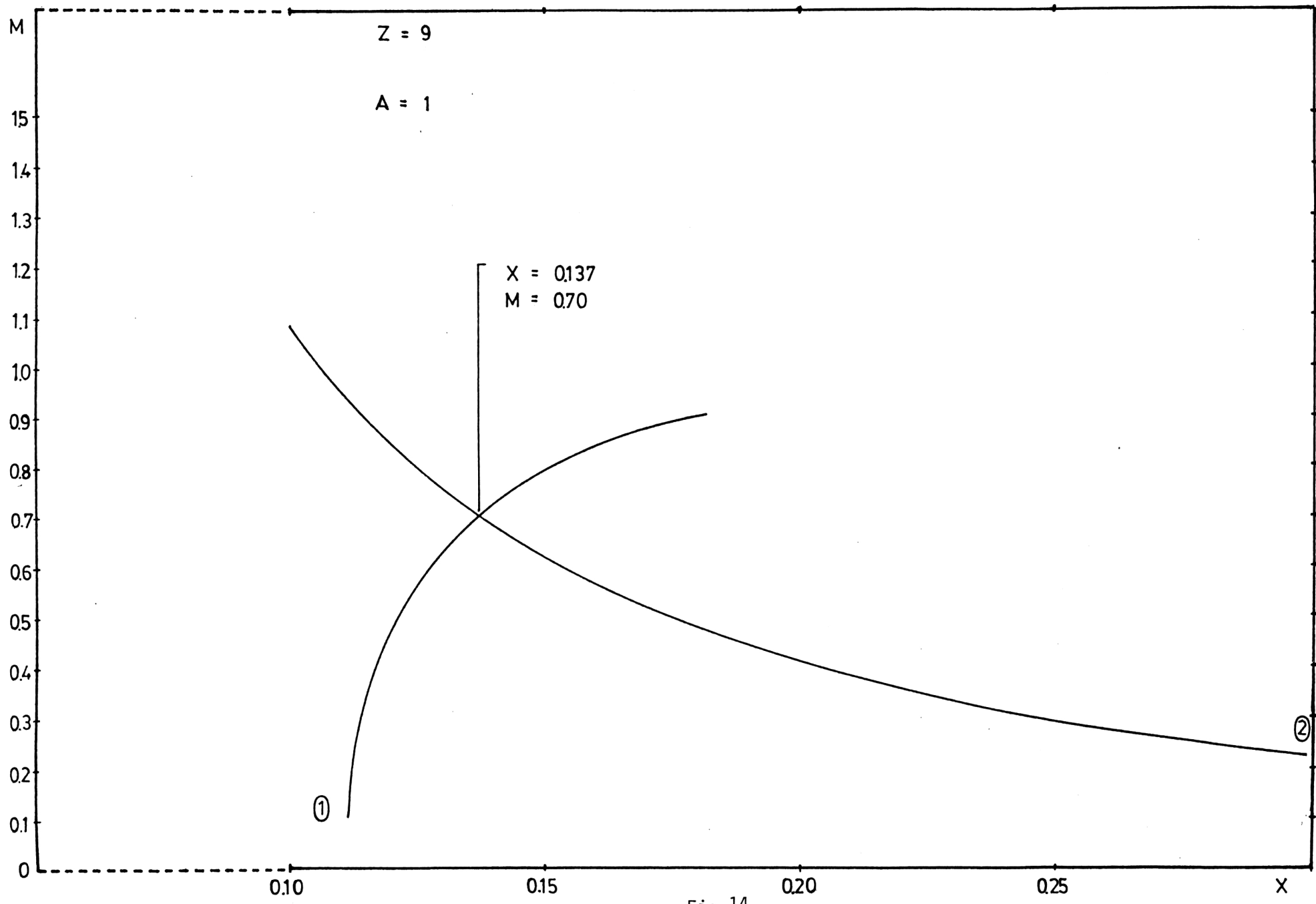


Fig.14

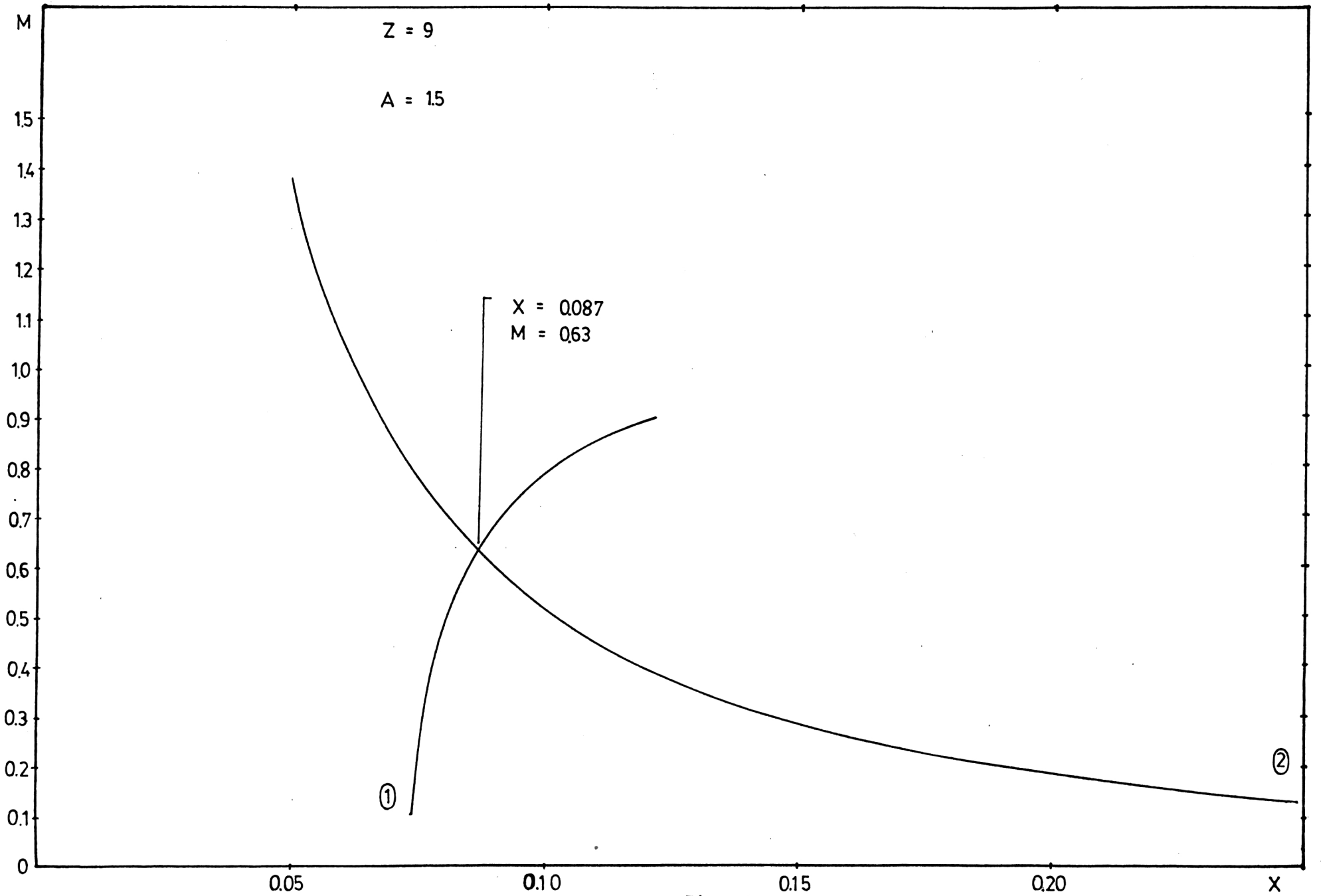


Fig. 15

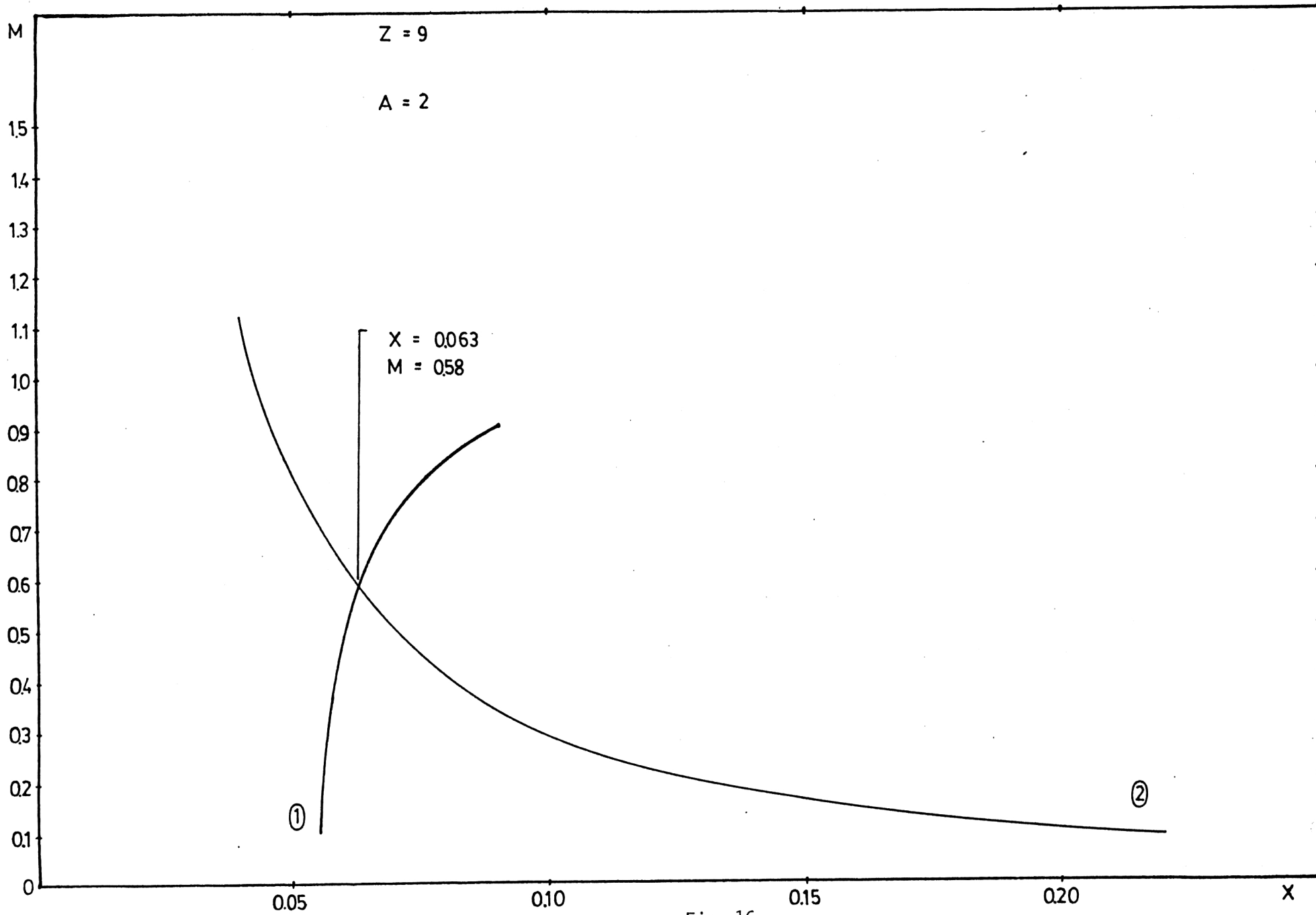


Fig. 16

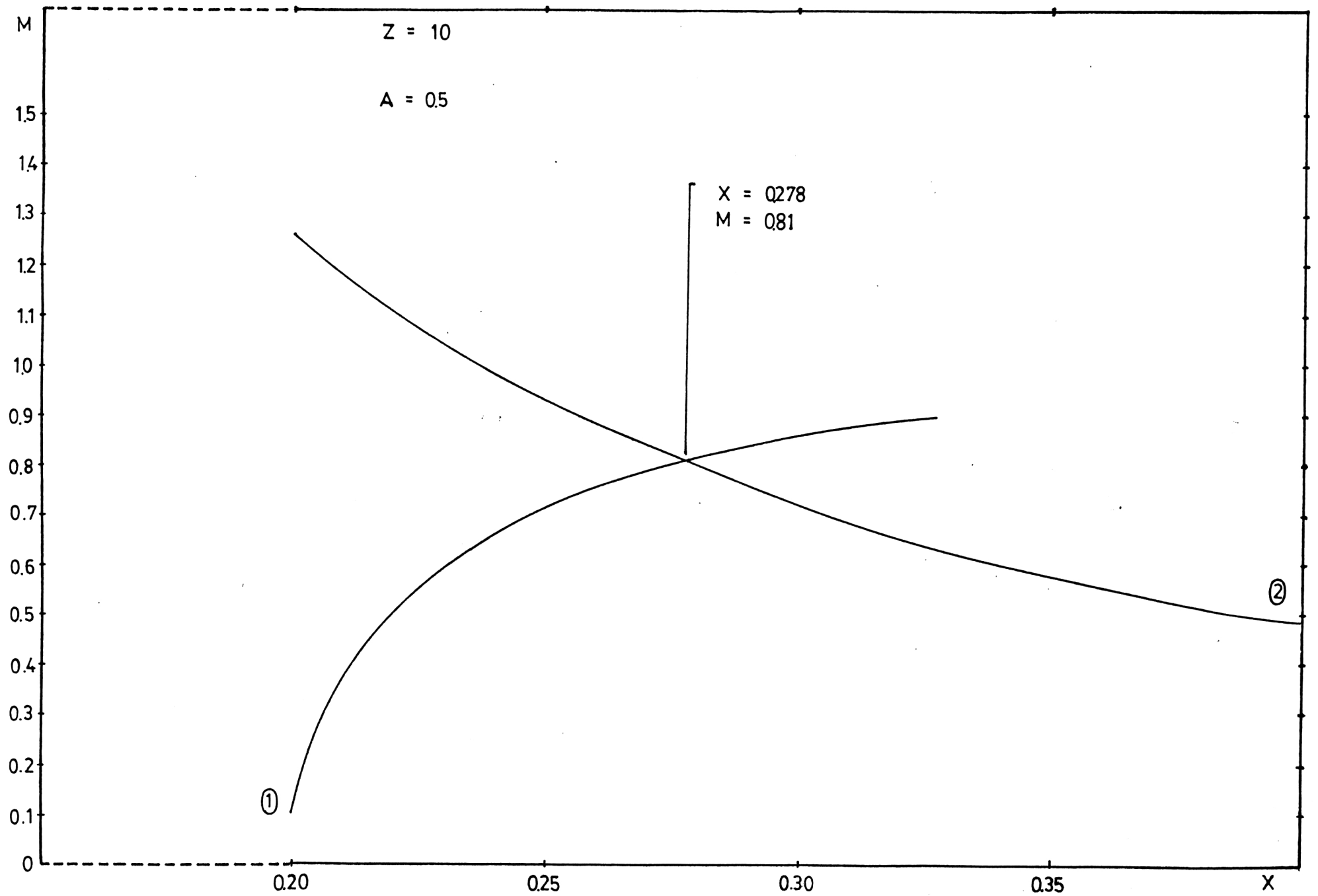


Fig. 17

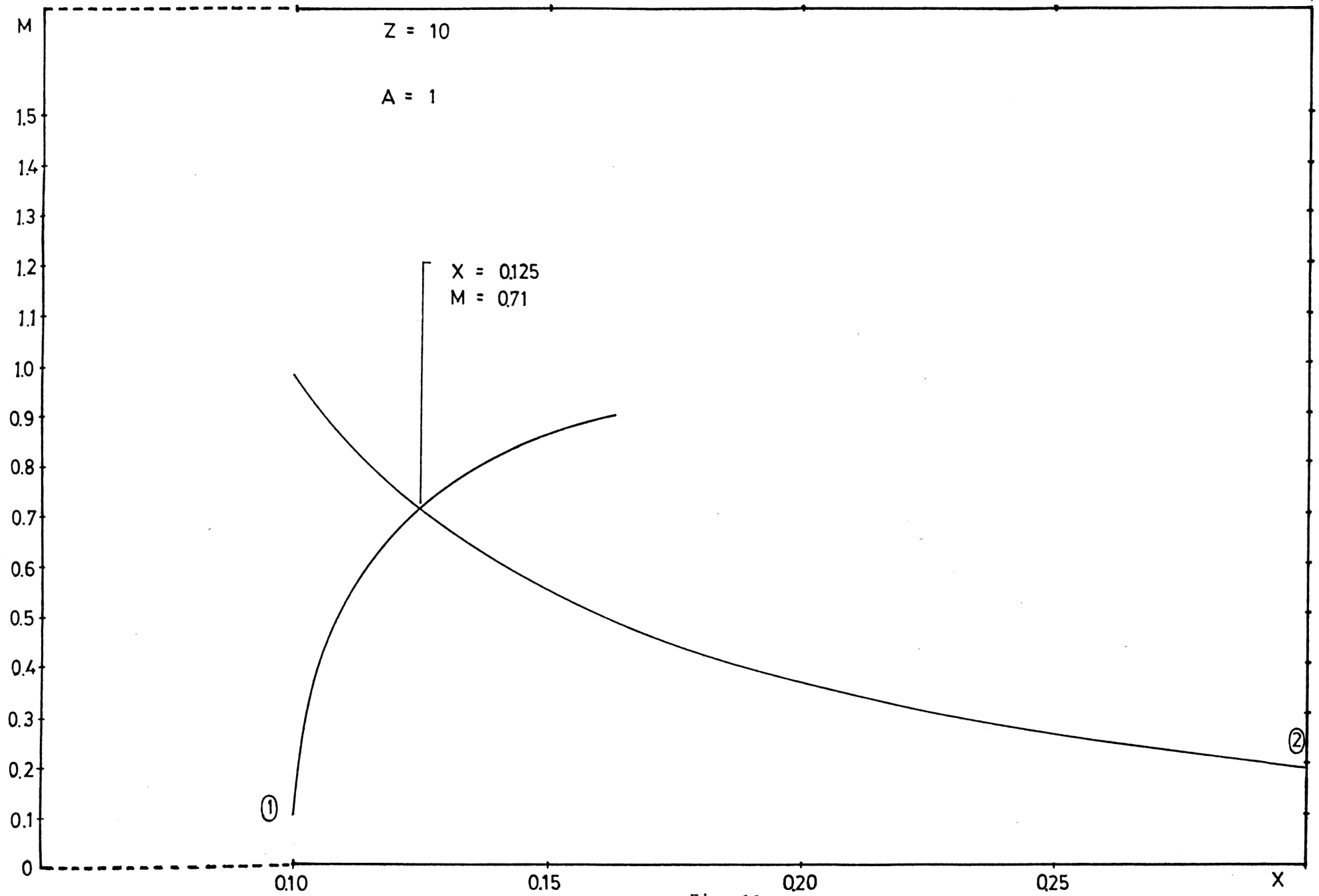


Fig. 18

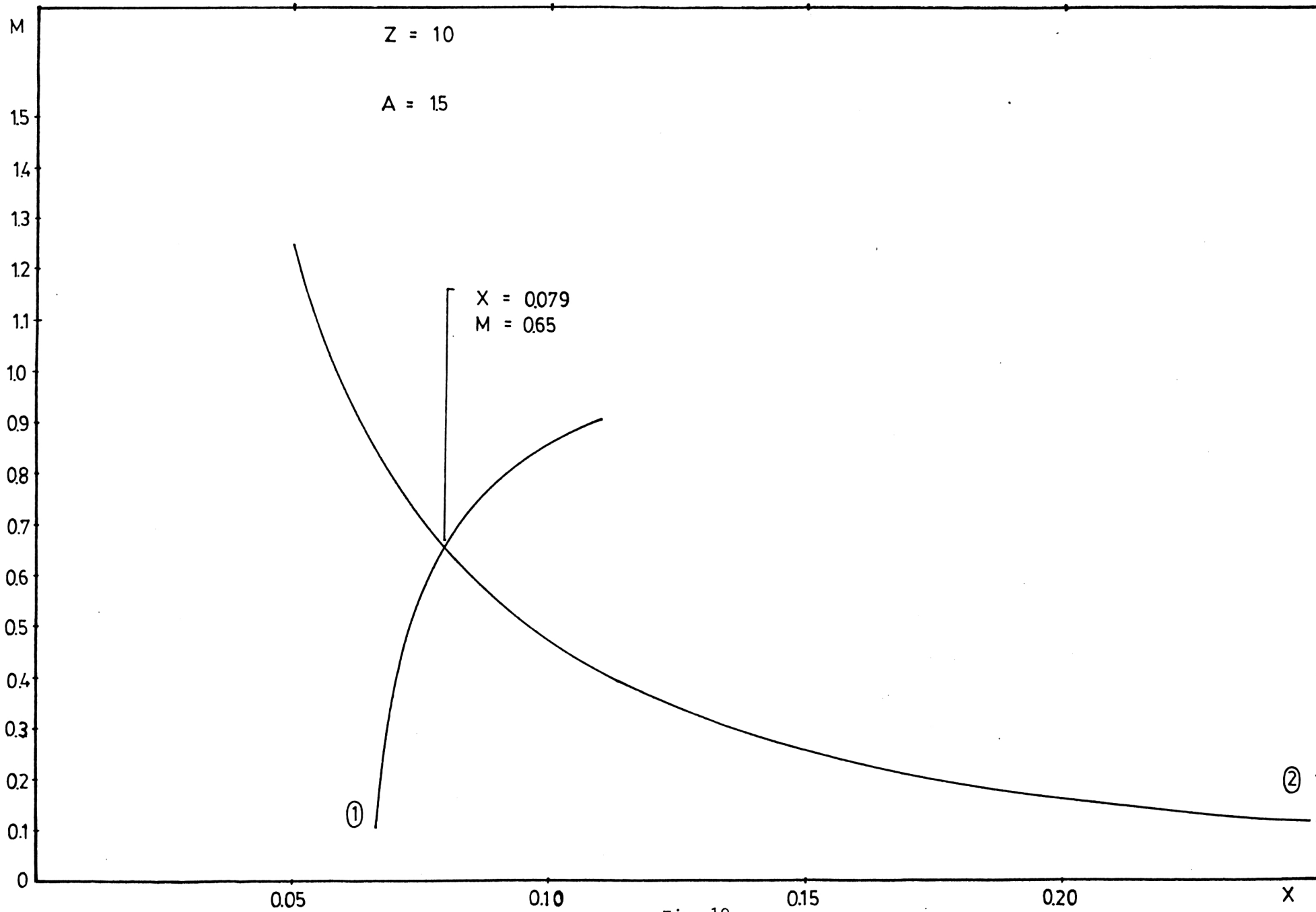


Fig. 19

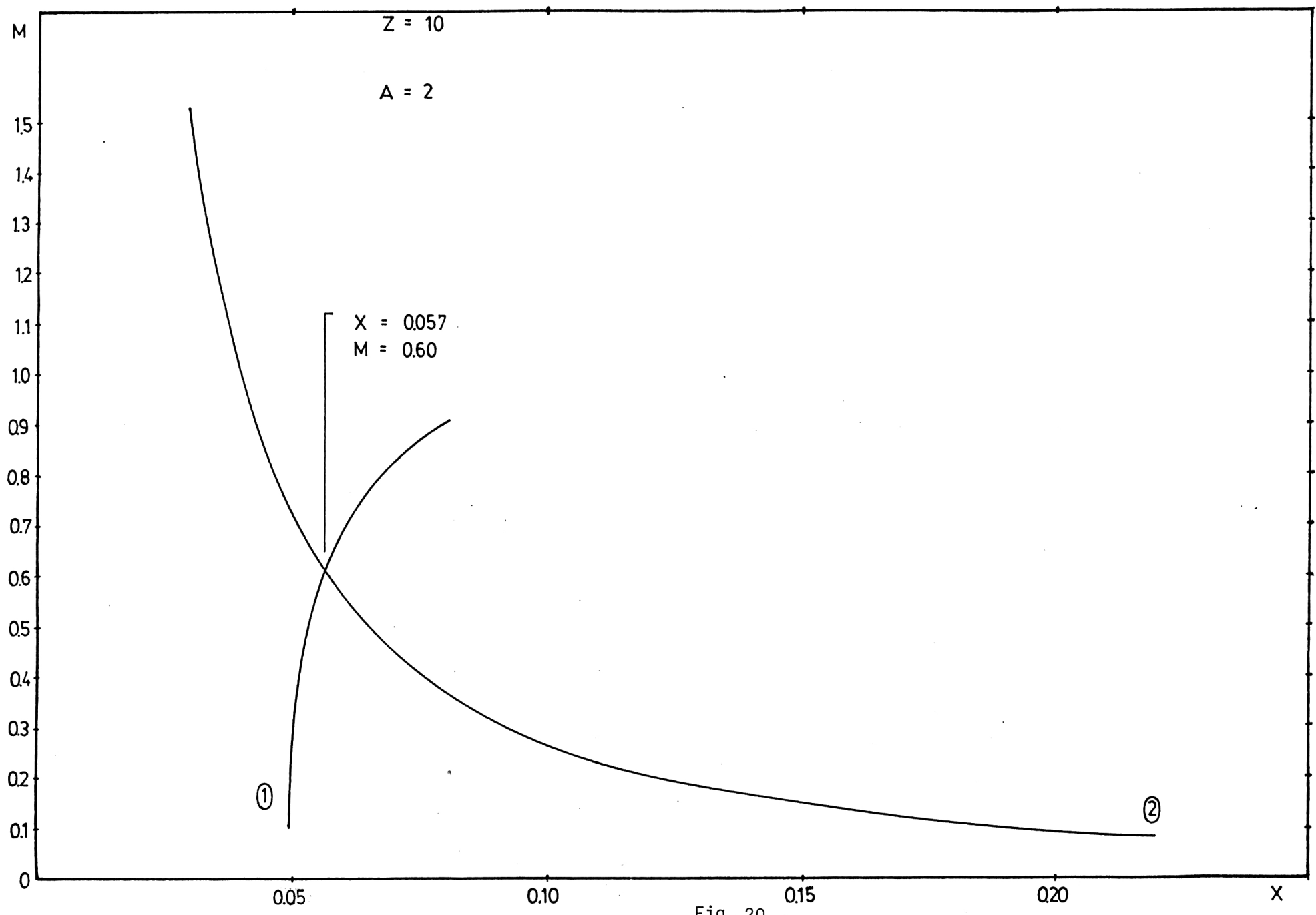


Fig. 20

Computer program and results for Newton-Raphson method and for obtaining the approximated value x_0, m_0 for each value of z and a are given in Appendix B. From these results we get Figure.21. Table 1-20 give the list of numerical points appearing in Figure.21

In our program we replace a by A , m by M and z by Z .

We have fitted the curves shown on Figure 21 to a quadratic concentration dependence by the least square best fit method (22)(see Appendix B3). The data used to obtain the below curves are listed in Table 21 [Noting that $\frac{J_1}{k_B T_g} = \text{SQR}(X)$]

$$\frac{J_1}{k_B T_g} = 0.655 - 0.320 c + 0.112 c^2 \quad \text{for } A = 0.5$$

$$\frac{J_1}{k_B T_g} = 0.443 \quad \text{for } A = 1$$

$$\frac{J_1}{k_B T_g} = 0.355 + 0.061 c + 0.027 c^2 \quad \text{for } A = 1.5$$

$$\frac{J_1}{k_B T_g} = 0.304 + 0.058 c + 0.081 c^2 \quad \text{for } A = 2$$

For curves for the $Z = 7$ nearest neighbor

$$\frac{J_1}{k_B T_g} = 0.613 - 0.302 c + 0.105 c^2 \quad \text{for } A = 0.5$$

$$\frac{J_1}{k_B T_g} = 0.414 \quad \text{for } A = 1$$

$$\frac{J_1}{k_B T_g} = 0.331 + 0.058 c + 0.025 c^2 \quad \text{for } A = 1.5$$

$$\frac{J_1}{k_B T g} = 0.284 + 0.060 c + 0.068 c^2 \quad \text{for } A = 2$$

For curves for the $Z = 8$ nearest neighbor

$$\frac{J_1}{k_B T g} = 0.580 - 0.287 c + 0.0999 c^2 \quad \text{for } A = 0.5$$

$$\frac{J_1}{k_B T g} = 0.390 \quad \text{for } A = 1$$

$$\frac{J_1}{k_B T g} = 0.312 + 0.055 c + 0.024 c^2 \quad \text{for } A = 1.5$$

$$\frac{J_1}{k_B T g} = 0.268 + 0.057 c + 0.065 c^2 \quad \text{for } A = 2$$

For curves for the $Z = 9$ nearest neighbor

$$\frac{J_1}{k_B T g} = 0.552 - 0.273 c + 0.094 c^2 \quad \text{for } A = 0.5$$

$$\frac{J_1}{k_B T g} = 0.371 \quad \text{for } A = 1$$

$$\frac{J_1}{k_B T g} = 0.296 + 0.052 c + 0.023 c^2 \quad \text{for } A = 1.5$$

$$\frac{J_1}{k_B T g} = 0.254 + 0.054 c + 0.062 c^2 \quad \text{for } A = 2$$

For curves for the $Z = 10$ nearest neighbor

$$\frac{J_1}{k_B T g} = 0.529 - 0.262 c + 0.089 c^2 \quad \text{for } A = 0.5$$

$$\frac{J_1}{k_B T_g} = 0.354 \quad \text{for } A = 1$$

$$\frac{J_1}{k_B T_g} = 0.282 + 0.050 c + 0.022 c^2 \quad \text{for } A = 1.5$$

$$\frac{J_1}{k_B T_g} = 0.242 + 0.052 c + 0.060 c^2 \quad \text{for } A = 2$$

The dependence of the critical temperature T_g on the effective number of neighboring atoms Z is also obtained as shown in Fig. 22 for various value of A and C , where A is the ratio between the strengths of the two competing interactions and C is the concentration.

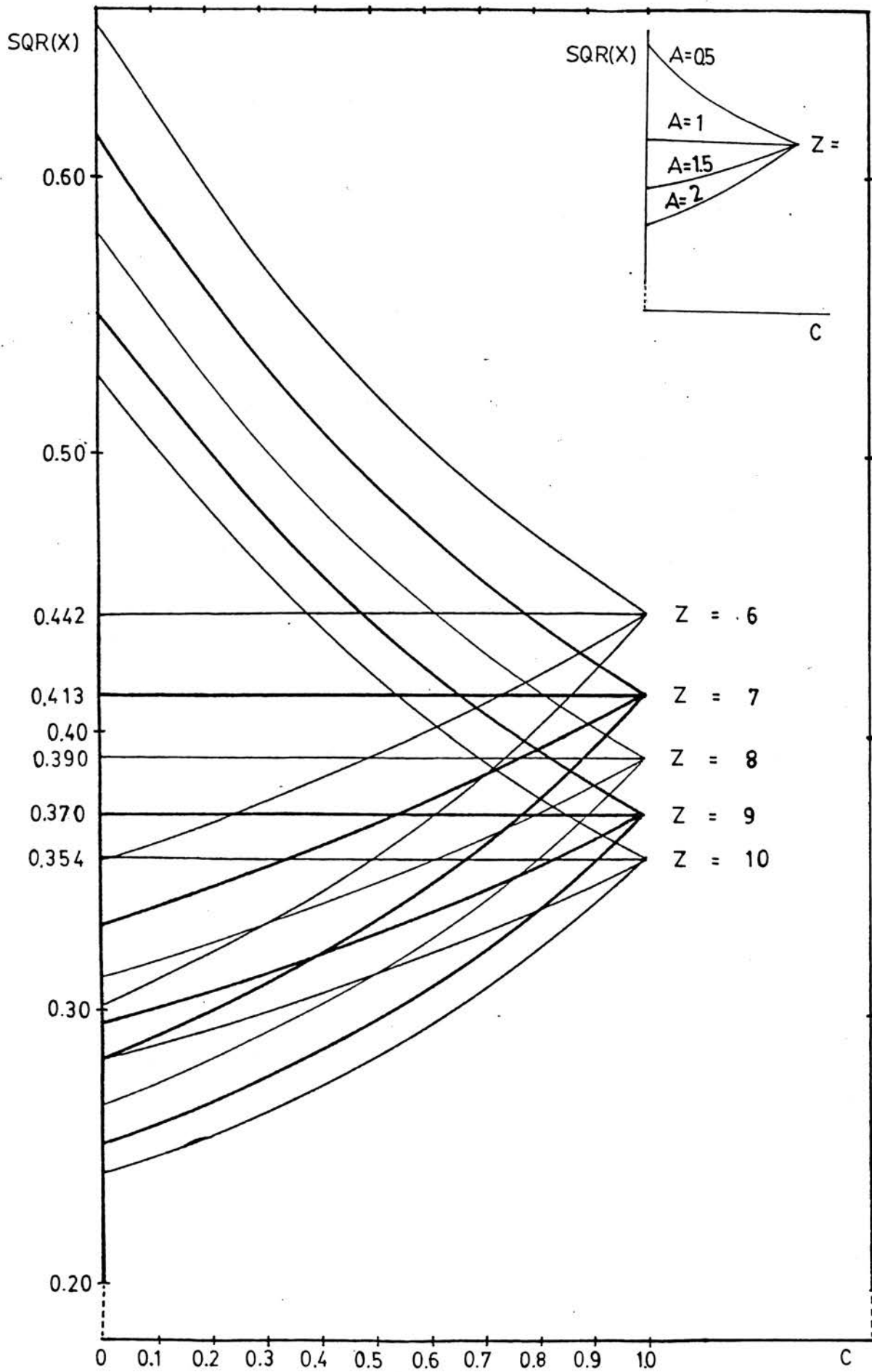


Fig.21

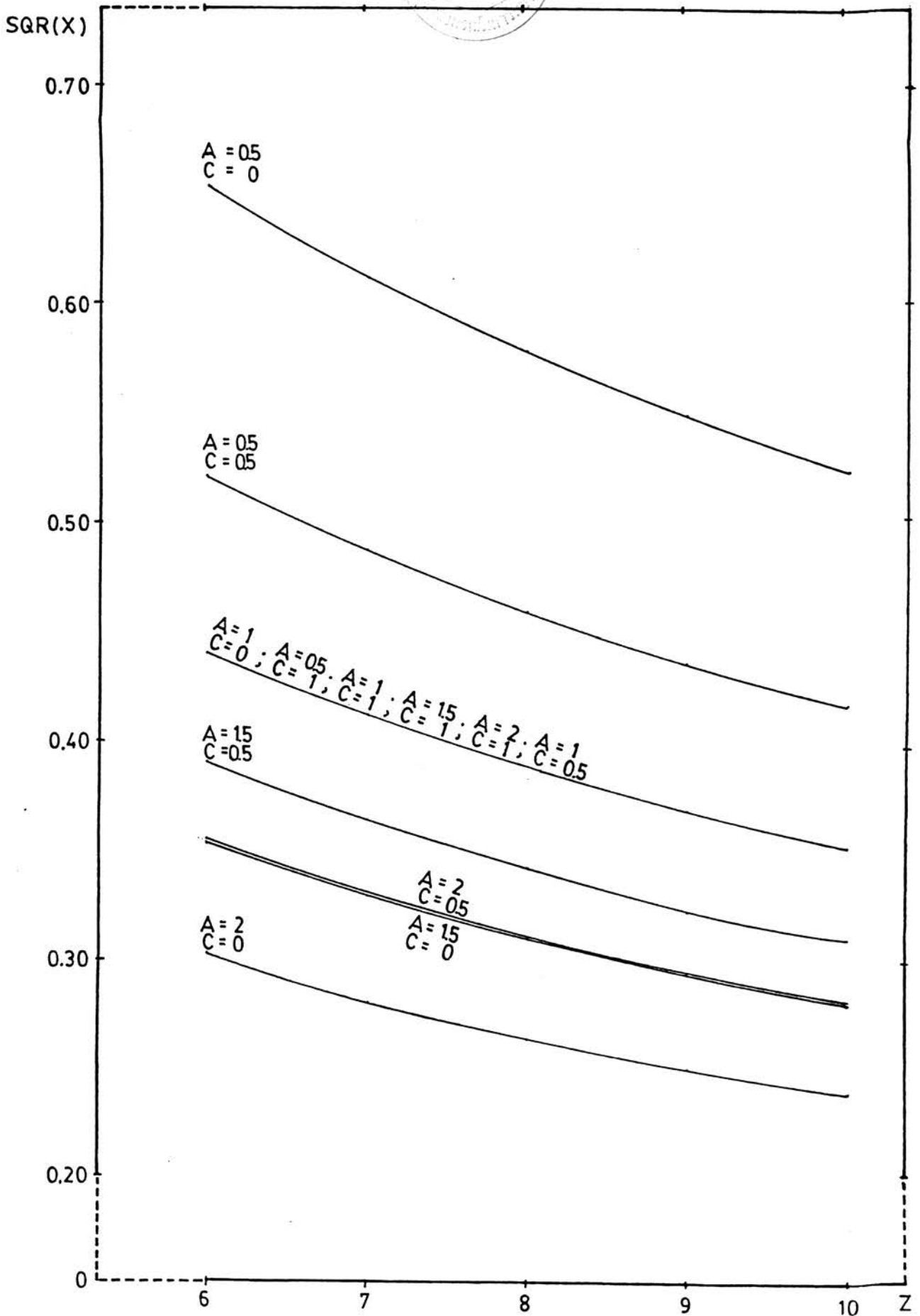


Fig. 22

A= .5
Z= 6
M= .74
X= .426

Table 1

C	M	X	SQR(X)	C	M	X	SQR(X)
0	.74170696	.428859464	.654873624	.51	.613024768	.270658754	.520248743
.01	.737106973	.424780443	.651751826	.52	.612646269	.268592636	.518259236
.02	.732567086	.420740458	.648645094	.53	.612319157	.26655736	.516291933
.03	.728087916	.41673723	.64555189	.54	.612041473	.264552244	.514346424
.04	.723669458	.412768988	.642471002	.55	.611811325	.262576624	.51242231
.05	.719312209	.408834426	.639401616	.56	.61162689	.260629852	.510519199
.06	.715017137	.404932657	.636343191	.57	.611486412	.258711297	.508636704
.07	.710785666	.401063174	.633295407	.58	.611386202	.256820344	.506774451
.08	.706619625	.397225813	.630258529	.59	.611330636	.254956394	.504932069
.09	.702521219	.393420712	.627232582	.6	.611312151	.253118865	.503109198
.1	.698492981	.389648271	.624218128	.61	.611331248	.251307191	.501305487
.11	.694537716	.385909119	.621215839	.62	.611386487	.249520821	.499520591
.12	.69065844	.382204067	.61822655	.63	.611476484	.24775922	.497754176
.13	.686858327	.378534076	.61525123	.64	.611599913	.246021866	.496005913
.14	.683140632	.374900216	.612290957	.65	.611755498	.244302253	.494273483
.15	.679508627	.371303632	.60934689	.66	.611942019	.24261789	.492562574
.16	.675965536	.367745502	.606420235	.67	.612158303	.240950297	.490866883
.17	.672514462	.364227011	.603512229	.68	.612403225	.23930501	.489189113
.18	.669158336	.360749316	.600624106	.69	.612675767	.237681374	.487525975
.19	.66589985	.357313522	.597757076	.7	.612974713	.236079556	.485886186
.2	.662741416	.353920655	.594912309	.71	.613299252	.234496521	.484250473
.21	.659685121	.350571647	.592090911	.72	.613648371	.232938055	.482636567
.22	.656732699	.347267316	.589293914	.73	.614021156	.231397755	.481032205
.23	.653885508	.344008759	.586522256	.74	.614416732	.229877225	.479455134
.24	.65114452	.34079534	.583776769	.75	.614834259	.228376883	.477887103
.25	.648510314	.337628692	.581058252	.76	.615272928	.226893956	.476333871
.26	.645983084	.334508715	.578367284	.77	.615731966	.225430481	.474795199
.27	.643562651	.331435574	.575704416	.78	.616210629	.223988304	.473270657
.28	.641248481	.328409313	.573070077	.79	.616708206	.222558081	.471760619
.29	.63903971	.325429852	.570464593	.8	.617224009	.221148478	.470264264
.3	.636935169	.322497004	.567889197	.81	.617757383	.219756166	.468781576
.31	.634933414	.31961048	.56534103	.82	.618307694	.218380828	.467312345
.32	.633032757	.316769699	.562823151	.83	.618874337	.217022154	.465856366
.33	.631231299	.3139748	.560334543	.84	.619456728	.215679641	.464413437
.34	.62952696	.311224649	.55787512	.85	.620054306	.214353594	.462993363
.35	.627917506	.308518854	.555444735	.86	.620666534	.213043127	.461585951
.36	.626400383	.305856769	.55304319	.87	.621292894	.211748158	.460191014
.37	.624973741	.303237708	.550670236	.88	.621932887	.210468415	.458816368
.38	.623634457	.3006660948	.548325586	.89	.622586035	.20920363	.457459783
.39	.622380159	.29812574	.546000919	.9	.623251878	.207953542	.456119235
.4	.621208247	.295613135	.543719886	.91	.623929973	.206717898	.454662401
.41	.6201116109	.293136868	.541458113	.92	.624619891	.205496645	.453317163
.42	.619101137	.290761666	.539223208	.93	.625321225	.204288954	.451983356
.43	.61816074	.288384858	.537014765	.94	.626033377	.203095174	.450666082
.44	.617292358	.28604566	.534832366	.95	.626756568	.20191483	.449349396
.45	.616493467	.28374328	.532675586	.96	.627490831	.200747844	.44804693
.46	.615761593	.281476931	.530543995	.97	.628233013	.199593846	.446759271
.47	.61509431	.279245832	.52843716	.98	.628985774	.198452671	.44548627
.48	.614489255	.277049215	.526354647	.99	.629747766	.197324107	.444211782
.49	.613944127	.274886323	.524296026	1	.630518732	.196207948	.442953664
.5	.613456687	.272756412	.522260966				

A= 1.5
Z= 6
M= .56
X= .125

Table 3

C	M	X	SQR(X)	C	M	X	SQR(X)
0	.558611457	.125472331	.354220738	.51	.569046205	.154320611	.392836621
.01	.558566652	.125937036	.354876085	.52	.569626207	.155012894	.393716769
.02	.558528652	.126405098	.355534946	.53	.570226802	.155711049	.394602394
.03	.558497601	.126876552	.35619735	.54	.570846437	.156415141	.395493541
.04	.558473642	.127351435	.356863328	.55	.571491569	.157125234	.396390255
.05	.558456925	.127829782	.357532911	.56	.572156662	.157841392	.397292577
.06	.558447602	.128311631	.358206129	.57	.572844166	.158563679	.398200551
.07	.558445829	.128797016	.358883015	.58	.573554618	.15929216	.399114219
.08	.558451764	.129285982	.359563599	.59	.574288444	.160026899	.400033623
.09	.558465573	.129778559	.360247914	.6	.575046151	.160767963	.400956894
.1	.558487423	.13027479	.360935991	.61	.575828237	.161515414	.401889803
.11	.558517484	.130774713	.361627865	.62	.576635203	.162269317	.402826659
.12	.558555933	.131278368	.362323568	.63	.577467554	.163029737	.403769411
.13	.558602949	.131785795	.363023133	.64	.578325801	.163796737	.404718096
.14	.558658717	.132297036	.363726595	.65	.579210458	.164570321	.405672751
.15	.558723426	.1328212131	.364433987	.66	.580122042	.165350731	.406633411
.16	.558797269	.1333331122	.365145344	.67	.581061074	.166137848	.407600109
.17	.558880443	.133854053	.365860701	.68	.582028073	.166931796	.408572877
.18	.558973153	.134380965	.366580094	.69	.583023564	.167732633	.409551746
.19	.559075605	.134911904	.367303558	.7	.584048067	.168540419	.410536745
.2	.559188012	.135446912	.368031129	.71	.585102104	.169355211	.411527899
.21	.559310593	.135986034	.368762843	.72	.586186194	.170177067	.412525233
.22	.559443571	.136529317	.369498738	.73	.587300854	.171006042	.413528768
.23	.559587174	.137076806	.370238851	.74	.588446594	.171842188	.414538525
.24	.559741636	.137628548	.370983218	.75	.589623921	.172685558	.415554519
.25	.559907199	.13818459	.371731879	.76	.590833334	.1735362	.416576764
.26	.560084107	.138744979	.372484872	.77	.592075324	.174394163	.417605271
.27	.560272611	.139309765	.373242234	.78	.593350374	.175259489	.418640048
.28	.560472971	.139878996	.374004066	.79	.594658953	.176132223	.419681097
.29	.560685449	.140452723	.374770226	.8	.596001519	.177012402	.420728419
.3	.560910316	.141030994	.375540936	.81	.597378517	.177900064	.42178201
.31	.561147849	.141613862	.376316173	.82	.598790374	.178795241	.422841863
.32	.56139833	.142201378	.37709598	.83	.600237501	.179697964	.423907966
.33	.561662049	.142793595	.377880397	.84	.601720291	.180608257	.424980302
.34	.561939304	.143390564	.378669446	.85	.6032239114	.181526144	.42605885
.35	.562230397	.143992341	.379463227	.86	.604749432	.182451643	.427143586
.36	.562535641	.144598978	.380261723	.87	.606306235	.183384768	.428234478
.37	.562855351	.145210531	.381064996	.88	.6068015159	.18432553	.429331492
.38	.563189854	.145827056	.381873089	.89	.609681366	.185273934	.430434589
.39	.563539481	.146448608	.382686043	.9	.611385102	.186229982	.43154372
.4	.563904574	.147075244	.383503903	.91	.613126584	.18719367	.432658838
.41	.564285479	.147707021	.384326712	.92	.614905999	.188164992	.433779689
.42	.564682551	.148343998	.385154512	.93	.616723502	.189143934	.43490681
.43	.565096153	.148986233	.385987348	.94	.618579216	.190130479	.436039539
.44	.565526657	.149633785	.386825244	.95	.620473232	.191124608	.437178005
.45	.56597444	.150286713	.387668303	.96	.622405609	.192126293	.438322134
.46	.56643989	.150945079	.388516511	.97	.624376372	.193135505	.439471848
.47	.566923399	.151608943	.389369931	.98	.626385512	.194152211	.440627065
.48	.567425371	.152278366	.390228608	.99	.628432689	.195176372	.4417877
.49	.567946216	.152953341	.391092585	1	.630518732	.196207948	.442953664
.5	.568486352	.153634138	.391961908				

A= 2
 Z= 6
 M= .50
 X= .091

Table 4

C	M	X	SQR(X)	C	M	X	SQR(X)
0	.506579085	.091811451	.303004045	.51	.501304886	.127054118	.356446515
.01	.506159584	.0923162696	.303835926	.52	.501814998	.128009934	.35776476
.02	.505746672	.0928265936	.30467457	.53	.502366466	.128977813	.359137596
.03	.505340563	.0933425118	.305520068	.54	.502967219	.129964055	.360505278
.04	.504941478	.093864115	.30637251	.55	.503613282	.130962968	.36188806
.05	.504549647	.0943914961	.307231991	.56	.504308778	.131976868	.363286207
.06	.504165308	.0949247498	.308095604	.57	.505055937	.133006079	.364699925
.07	.503788708	.0954639727	.308972447	.58	.505857096	.134050933	.366129667
.08	.503420103	.0960092638	.309853617	.59	.506714708	.135111768	.367575527
.09	.50305976	.0965607241	.310742215	.6	.507631342	.136188933	.369037848
.1	.502707955	.0971184568	.311638343	.61	.508609688	.137282782	.370516912
.11	.502364975	.0976825674	.312542105	.62	.50965256	.138393678	.372013007
.12	.502031118	.0982531638	.313453607	.63	.510762901	.139521989	.373526423
.13	.501706695	.0988303562	.314372957	.64	.511943783	.140668091	.375057451
.14	.501392027	.0994142573	.315300265	.65	.513198411	.141832368	.376606384
.15	.50108745	.100004982	.316235644	.66	.51453012	.143015206	.378173514
.16	.500793312	.100602649	.317179207	.67	.515940378	.144216998	.379759132
.17	.500509975	.101207378	.318131071	.68	.51743878	.145438139	.381363525
.18	.500237818	.101819293	.319091355	.69	.519023048	.146679026	.382988978
.19	.499977231	.10243852	.320060181	.7	.52069902	.147940058	.384629767
.2	.499728626	.103065187	.321037672	.71	.522470648	.149221631	.386292158
.21	.499492428	.103699427	.322023954	.72	.524341979	.150524139	.387974405
.22	.499269081	.104341374	.323019155	.73	.526317145	.151847569	.389676749
.23	.499058907	.104991168	.324023407	.74	.528400341	.153193497	.391399409
.24	.4988662809	.10564895	.325036844	.75	.530595206	.154561691	.393142563
.25	.4986868871	.106314864	.326059602	.76	.532907793	.155951096	.394906644
.26	.498513756	.106989059	.327091821	.77	.535340536	.157363842	.396691117
.27	.498362014	.107671687	.328133642	.78	.537898218	.15879963	.398496713
.28	.498226216	.108362903	.329185211	.79	.540584924	.16025873	.400323282
.29	.498106959	.109062867	.330246676	.8	.543404596	.161741376	.402170829
.3	.498004868	.109771743	.331318129	.81	.546360961	.16324776	.404039306
.31	.497920594	.110489696	.332399904	.82	.549457581	.164778026	.405928597
.32	.497854618	.1112169	.333491979	.83	.552697538	.166332261	.407838523
.33	.497800254	.111953529	.334594574	.84	.556083832	.167910495	.409768831
.34	.4977781646	.112699763	.335707854	.85	.559616725	.169512692	.411719191
.35	.497775774	.113455788	.336831988	.86	.563304199	.171138746	.413689191
.36	.497791454	.114221792	.337967147	.87	.567141671	.172788402	.41567834
.37	.497829542	.11499797	.339113506	.88	.571131995	.17446165	.417686066
.38	.497890929	.11578452	.340271245	.89	.575275442	.17615793	.419711722
.39	.497976556	.116581647	.341440547	.9	.579571686	.177876934	.42175459
.4	.498087402	.11738956	.342621599	.91	.584019318	.179618216	.423813893
.41	.498224495	.118208474	.343814592	.92	.588618367	.181381277	.425888808
.42	.498388921	.119038609	.345019722	.93	.593365354	.183165584	.427978486
.43	.498581605	.119880191	.346237189	.94	.59825836	.184970586	.430062069
.44	.498804335	.120733452	.347467196	.95	.60329462	.186795724	.43219872
.45	.499057756	.121598631	.348709953	.96	.608471133	.188640504	.434327646
.46	.499343375	.122475972	.349965673	.97	.613764785	.19050443	.436462132
.47	.499662563	.123365726	.351234574	.98	.619232491	.19238717	.438619574
.48	.500016759	.124268149	.352516678	.99	.624811337	.19428834	.44078151
.49	.500407473	.125183507	.353812814	1	.630518732	.196207948	.442953664
.5	.500836294	.12611207	.355122613				

A= .5
Z= 7
M= .76
X= .374

Table 5

C	M	X	SQR(X)	C	M	X	SQR(X)
0	.763513137	.3759259	.613127964	51	.637203562	.236872143	.486695124
.01	.759204683	.37238394	.610232694	52	.636807253	.235042273	.484811585
.02	.754949061	.368877019	.607352467	53	.636465968	.233240205	.482949485
.03	.750745254	.365402712	.604485494	54	.636177706	.231465318	.481108426
.04	.746592609	.361959039	.601630318	55	.635940524	.229717007	.479288021
.05	.742491235	.358544427	.598785794	56	.63575254	.227994469	.477467885
.06	.738441193	.355157673	.595951066	57	.635611935	.226297759	.47570764
.07	.734443278	.351797921	.593125553	58	.635516949	.22462569	.473946917
.08	.73049861	.34846463	.590308928	59	.635465882	.222977894	.472205351
.09	.726608691	.345157542	.5875011	60	.635457097	.221353864	.470482587
.1	.72277538	.34187666	.584702198	61	.635489013	.219753072	.468778276
.11	.719000861	.338622217	.581912551	62	.635560108	.218175009	.467092078
.12	.715287607	.335394648	.579132669	63	.635668917	.216619182	.465423659
.13	.711638338	.332194563	.576363222	64	.635814031	.215085113	.463772696
.14	.708055973	.329022716	.573605018	65	.635994093	.213572305	.46213967
.15	.704543578	.325879977	.570858982	66	.636207798	.212080395	.460521873
.16	.701104308	.322767302	.568126133	67	.636453893	.210608853	.458921402
.17	.697741353	.319685706	.565407557	68	.636731172	.209157281	.457337163
.18	.69445788	.316636232	.562704391	69	.637038479	.207725263	.45576887
.19	.691256967	.313619928	.560017792	70	.637374699	.206312395	.454216242
.2	.688141559	.310637821	.557348923	71	.637738765	.204918284	.452679008
.21	.685114409	.307690897	.554698925	72	.63812965	.203542549	.4511569
.22	.682178033	.304780078	.552068907	73	.638546368	.202184818	.449649661
.23	.679334675	.301906206	.549459922	74	.638987971	.200844731	.448157038
.24	.676586271	.299070034	.546872959	75	.639453551	.199521937	.446678795
.25	.673934423	.296272211	.54430893	76	.639942232	.198216094	.445214661
.26	.67138039	.293513279	.541768659	77	.640453175	.196926872	.443764433
.27	.668925076	.290793667	.539252878	78	.640985575	.195653947	.442327872
.28	.666569027	.288113688	.536762226	79	.641538655	.194397005	.4409904757
.29	.664312442	.285473544	.534297243	80	.642111673	.193155741	.439494871
.3	.662155184	.28287333	.531858374	81	.642703911	.191929858	.438093801
.31	.660096797	.280313034	.529445969	82	.643314683	.190719066	.43671394
.32	.658136526	.277792547	.527060288	83	.643943327	.189523082	.435342489
.33	.656273342	.275311671	.524701507	84	.644589209	.188341634	.433983449
.34	.654505971	.272870126	.522369722	85	.645251715	.187174452	.432636629
.35	.652832916	.270467557	.520064955	86	.645930263	.186021278	.43130184
.36	.65125249	.268103546	.517787163	87	.646624283	.184881855	.429978901
.37	.649762838	.265777617	.515536242	88	.647333234	.183755938	.428667632
.38	.648361969	.263489245	.513312035	89	.648056592	.182643286	.427367858
.39	.647047775	.261237866	.511114338	90	.648793853	.181543662	.426079408
.4	.64581806	.25902288	.508942905	91	.649544534	.180455837	.424802115
.41	.644670558	.256843663	.506797457	92	.650308168	.179382587	.423535816
.42	.643602954	.254699567	.504677686	93	.651084307	.178320695	.422280352
.43	.642612905	.252589929	.502583256	94	.651872517	.177270947	.421035565
.44	.641692046	.250514079	.500513815	95	.652672383	.176233135	.419801304
.45	.6408556018	.248471335	.498468991	96	.653483502	.175207055	.418577419
.46	.640094468	.246461017	.496448404	97	.654305489	.17419251	.417363763
.47	.6393981067	.244482444	.49445166	98	.655137971	.173189306	.416160193
.48	.638743515	.242534937	.492478362	99	.655980588	.172197254	.41496657
.49	.6381169551	.240617826	.49052811	100	.656832995	.171216168	.413782755
.5	.637656956	.238730446	.488600498				

A= 1.5
 Z= 7
 M= .58
 X= .105

Table 7

C	M	X	SGR(X)	C	M	X	SGR(X)
0	.586267854	.109159888	.330393536	.51	.595682921	.134477171	.366711291
.01	.586208635	.109567269	.331009469	.52	.596260499	.135085352	.367539593
.02	.58613663	.109977606	.331628717	.53	.596859377	.135698712	.368373061
.03	.58607199	.110390932	.332251368	.54	.59747999	.136317364	.369211734
.04	.58601467	.110807278	.332877271	.55	.598122776	.136941185	.370055651
.05	.585965427	.111226676	.333506636	.56	.598788181	.137570469	.370904852
.06	.585923822	.111649159	.334139431	.57	.599476651	.138205032	.371759373
.07	.585890222	.112074761	.334775667	.58	.600188664	.138845167	.372619252
.08	.585864793	.112503513	.335415434	.59	.600924663	.13949019	.373484524
.09	.58584771	.112935451	.336058762	.6	.601684998	.140141834	.374355225
.1	.58583915	.113370609	.336705523	.61	.602470287	.140798395	.375231389
.11	.585839294	.113809021	.337355927	.62	.603280933	.141461026	.376113049
.12	.585848327	.114250724	.338009946	.63	.6041174	.142129179	.377000237
.13	.585866439	.114695752	.338667612	.64	.604980154	.142803167	.377892964
.14	.585893824	.115144142	.339328958	.65	.605869658	.143482882	.378791317
.15	.58593068	.11559593	.339994015	.66	.606786375	.144168495	.379695266
.16	.585977212	.116051155	.340662818	.67	.607730769	.144860095	.380604854
.17	.586033628	.116509854	.341335398	.68	.608703296	.145557591	.381520166
.18	.58610014	.116972065	.342011791	.69	.609704413	.146261182	.382441043
.19	.586176966	.117437827	.342692029	.7	.610734568	.146970782	.383367688
.2	.586264329	.117907179	.343376148	.71	.611794206	.147686527	.384300049
.21	.586362458	.118380161	.344064182	.72	.612883764	.148408643	.385238145
.22	.586471586	.118856614	.344756165	.73	.614003669	.149136533	.386181994
.23	.586591952	.119337177	.345452138	.74	.615154342	.149870073	.387131597
.24	.586723799	.119821294	.346152126	.75	.616336619	.150611149	.388086982
.25	.586867379	.120309265	.346856174	.76	.617549609	.151359617	.389048051
.26	.587022947	.120800954	.347564317	.77	.618794982	.152111688	.390014964
.27	.587190764	.121296583	.34827659	.78	.620072677	.152871332	.390987837
.28	.587371097	.121796136	.348993031	.79	.621383044	.153637377	.391966041
.29	.587564221	.122299657	.349713678	.8	.622726419	.154409847	.392950184
.3	.587770413	.12280719	.350438568	.81	.624103115	.155188764	.393939052
.31	.58798996	.123319782	.35116774	.82	.625513427	.155974146	.394932822
.32	.588223153	.123834477	.351901232	.83	.62695763	.156766007	.395931873
.33	.588470292	.124354322	.352639082	.84	.628435971	.157564336	.396936375
.34	.58873168	.124878365	.353381133	.85	.629946677	.158369213	.397946295
.35	.589007628	.125406652	.354128016	.86	.63149595	.159180569	.398961736
.36	.589298456	.125939231	.354879178	.87	.633077963	.159998429	.399982637
.37	.589604466	.126476151	.355634636	.88	.634694863	.160822792	.401019171
.38	.58992605	.127017461	.356395091	.89	.63634677	.161653646	.402061747
.39	.590263485	.127563211	.357159923	.9	.638033774	.162490989	.403110171
.4	.590617137	.12811345	.357929392	.91	.639755935	.16333348	.404164064
.41	.590987358	.128668229	.358703539	.92	.641513286	.164185063	.405223561
.42	.591374504	.1292276	.359482405	.93	.643309827	.165044756	.406288315
.43	.591778941	.129791613	.360266031	.94	.645133531	.165912494	.407358149
.44	.59220104	.13036032	.361054455	.95	.646996341	.16677933	.408433023
.45	.592641182	.130933775	.361847724	.96	.6488994171	.167654015	.409513035
.46	.593099749	.131512029	.362645873	.97	.650822905	.168536282	.410608285
.47	.593577135	.132095137	.363448947	.98	.6527794403	.169426689	.411718745
.48	.594073737	.132683151	.364256964	.99	.6547594497	.170325331	.412844278
.49	.594589561	.133276125	.365070027	1	.656862995	.171231615	.413985275
.5	.5951126216	.133874114	.365888116				

A= 2
 Z= 7
 K= .54
 Y= .079

Table 8

C	M	X	SOR(X)	C	M	X	SOR(X)
0	.534471658	.6797627713	.262316792	51	.526635038	.11058239	.332539305
.01	.533980007	.6801443647	.263097836	52	.527142338	.111421613	.333798761
.02	.533495268	.6805908333	.263885247	53	.527696388	.112273302	.335072884
.03	.533017735	.6810421952	.264679109	54	.528299241	.113137727	.33635952
.04	.532547567	.6814985505	.26547951	55	.528953045	.114015166	.337661318
.05	.532085093	.681959981	.266286537	56	.529660048	.114905902	.338977731
.06	.531630511	.6824265703	.267100279	57	.530422604	.115810229	.340306019
.07	.53118411	.6828984635	.267920828	58	.53124317	.116728442	.341655444
.08	.53074617	.6833755679	.268748278	59	.532124312	.117660848	.34301727
.09	.530316977	.6838581526	.269582721	60	.533066707	.118607756	.344394768
.1	.529896834	.6843462486	.270424256	61	.534079146	.119569485	.345788208
.11	.529486052	.6848399493	.271272981	62	.535158533	.120546357	.347197864
.12	.529084956	.6853393457	.272128995	63	.536309684	.121538701	.348624011
.13	.528693883	.6858445471	.272992401	64	.53753633	.122546885	.350066923
.14	.528313183	.6863556412	.273863304	65	.538841111	.123571142	.351526272
.15	.527943222	.6868727337	.274741809	66	.540227876	.124611915	.353004129
.16	.527584378	.6873959286	.275628024	67	.541699171	.125669513	.35449998
.17	.527237046	.6879253332	.276522062	68	.543255439	.126744277	.356011624
.18	.526891638	.6884610557	.277424033	69	.5448912003	.127836548	.357540372
.19	.526557891	.6890032079	.278334054	70	.54660656	.128946664	.3590891442
.2	.5262368322	.6895519041	.279252242	71	.548408859	.130074958	.36065906
.21	.525927123	.6901072612	.300178716	72	.550296084	.131221753	.362245432
.22	.525628807	.6906693988	.301113598	73	.552259833	.132387384	.363849744
.23	.5253419066	.6912386354	.302057014	74	.554299087	.133572089	.365473158
.24	.525066838	.6918151086	.303009099	75	.556415183	.13477621	.367115798
.25	.5248025934	.6923987348	.303969957	76	.558607876	.135999984	.368781787
.26	.5245492926	.6929882457	.304939748	77	.560878401	.137243646	.370466098
.27	.524306412	.693583682	.305918597	78	.563225543	.138507396	.372165018
.28	.5240747016	.6941851885	.306906645	79	.565650025	.1397914	.373886881
.29	.523853587	.6947928522	.307904031	80	.568152609	.141095782	.375627185
.3	.523642908	.6954066945	.308910901	81	.5707329122	.142420421	.377386567
.31	.5234428187	.69602669543	.309927402	82	.57339122	.143765946	.379164801
.32	.5232534068	.6966521941	.310953685	83	.5761272651	.145131731	.380961567
.33	.5230746827	.69728377604	.311989904	84	.578942079	.146517891	.382776558
.34	.522906676	.6979216737	.313036218	85	.581835074	.147924358	.384609262
.35	.522749284	.69856542787	.314092727	86	.584805963	.149350706	.386459191
.36	.522602679	.69921526843	.315159776	87	.587854778	.150796892	.388325756
.37	.522466945	.100000004	.316237353	88	.590982474	.152262523	.390208307
.38	.5223413351	.10055595	.317325492	89	.594191807	.153747225	.39210614
.39	.522225824	.101139446	.318424967	90	.597484803	.155250583	.394018506
.4	.522120665	.101742847	.319535336	91	.600862936	.156772148	.395944827
.41	.5220259262	.102366947	.320657055	92	.6043251926	.15831145	.397883714
.42	.5219417362	.103011659	.321790241	93	.6078724084	.159868017	.399834987
.43	.521868015	.103677065	.322935109	94	.6115045203	.161441389	.401797657
.44	.521804833	.104363583	.324091858	95	.615222242	.163031141	.40377115
.45	.521752197	.1050714817	.325260469	96	.619025743	.164636907	.405754738
.46	.52170913	.105800286	.326441511	97	.622905852	.166258401	.407747962
.47	.521675442	.1065504978	.327635432	98	.6268721089	.167895444	.409750466
.48	.52165074474	.1073226909	.328841769	99	.630922545	.169547993	.411762059
.49	.521634934	.108116291	.3300611042	100	.635050998	.171216168	.413782755
.5	.5216272527	.108931518	.331293477				

A= .5
Z= 8
M= .78
X= .335

Table 9

C	M	X	SR(X)	C	M	X	SR(X)
0	.781414889	.335607207	.579316155				
.01	.777362285	.332473389	.576605055	.51	.657749793	.211256398	.459626368
.02	.773356628	.329371684	.573909125	.52	.657330648	.209605897	.457827366
.03	.769396599	.32629964	.571226435	.53	.656969577	.207980879	.456049207
.04	.765481259	.32325519	.568555354	.54	.656664578	.206380777	.454291511
.05	.761610046	.320236629	.565894539	.55	.656413699	.2048045034	.452553902
.06	.757782778	.31724258	.563242913	.56	.656215038	.203253106	.450836008
.07	.753999646	.314271973	.560599655	.57	.656066743	.201724458	.449137746
.08	.750261206	.311324023	.557964177	.58	.655967015	.200218567	.447457895
.09	.746568379	.308398206	.55533612	.59	.655914112	.198734925	.445796955
.1	.742922429	.30549424	.552715333	.6	.655906344	.197273033	.44415429
.11	.739324955	.302612063	.550101866	.61	.655942076	.195832407	.442529555
.12	.735777865	.299751016	.54749595	.62	.65601973	.194412573	.440922412
.13	.732283354	.296913815	.544897986	.63	.656137777	.193013073	.439332531
.14	.728843872	.294098536	.542308525	.64	.656294745	.191633458	.437759589
.15	.725462067	.291306591	.539728257	.65	.656489215	.190273292	.43620327
.16	.722140845	.288538703	.537157967	.66	.656719815	.188932154	.434663265
.17	.718883125	.285795683	.534598619	.67	.656985228	.187609531	.433139275
.18	.715691993	.283078412	.532051137	.68	.657284181	.186305324	.431631004
.19	.712570545	.280389781	.529516583	.69	.657615452	.185018943	.430138168
.2	.709521863	.277724824	.526996036	.7	.657977862	.183749913	.428660486
.21	.706548959	.275090393	.524490603	.71	.658370279	.182497865	.427197688
.22	.703654727	.27248544	.52200138	.72	.658791611	.181262643	.425749508
.23	.700841893	.269910849	.51952945	.73	.659240911	.180043802	.424315687
.24	.698111298	.26736745	.517075865	.74	.659716869	.178841005	.422895974
.25	.695470262	.264856002	.514641625	.75	.660218816	.177653925	.421490124
.26	.692915742	.262377188	.512227672	.76	.660745719	.176482244	.420099789
.27	.690451121	.259931599	.509834875	.77	.661296681	.175325654	.418719663
.28	.688077766	.257519737	.507464025	.78	.661870839	.174183954	.417353392
.29	.68578568	.255142001	.505115829	.79	.662467363	.173056553	.416000665
.3	.683568895	.252798694	.502790905	.8	.663085456	.171943468	.414660666
.31	.681414479	.250490022	.500489782	.81	.663724351	.170844321	.413333184
.32	.679313643	.248216092	.498212899	.82	.664383331	.169758845	.412018016
.33	.677268178	.245976922	.495960606	.83	.665061623	.16868578	.410714962
.34	.6752791586	.243772445	.493733172	.84	.665758607	.167627869	.409423826
.35	.6733469108	.24160251	.491530782	.85	.666473605	.1665851867	.40814442
.36	.6714637737	.239466896	.489353355	.86	.667205986	.165548533	.406876555
.37	.670636255	.237365317	.487201516	.87	.667955142	.164527632	.405620059
.38	.6698443246	.235297424	.485074659	.88	.668720486	.163518936	.404374747
.39	.669077126	.23326282	.482972898	.89	.669501456	.162522222	.403140045
.4	.668336168	.231261062	.480896103	.9	.670297509	.161537274	.401916999
.41	.665598519	.22929167	.478844097	.91	.671102122	.160563881	.400704232
.42	.664482233	.227354131	.476816664	.92	.671932794	.159601837	.399501987
.43	.663445281	.225447909	.474813552	.93	.672771038	.158650942	.398310107
.44	.662485574	.223572446	.47283448	.94	.67362239	.157716998	.397128441
.45	.661600984	.221727168	.470879144	.95	.674486398	.156791817	.395958037
.46	.660789382	.219911492	.468947217	.96	.675362629	.155883211	.394795151
.47	.660048508	.218124526	.467038358	.97	.676250666	.154995	.393643339
.48	.659376281	.21636658	.465152211	.98	.677150107	.154057604	.392500961
.49	.65877051	.214636153	.463288413	.99	.678060562	.153169053	.391368181
.5	.658229053	.212932956	.46144659	1	.678981657	.152250976	.390244764

Table 11

A= 1.5
Z= 8
M= .60
X= .096

C	M	X	SGR(X)	C	M	X	SGR(X)
0	.609962601	.0968449812	.311195263	51	.618432402	.119478832	.345657102
.01	.609852615	.0972087913	.311783244	52	.619006888	.120023078	.34644347
.02	.60975023	.0975752546	.312370361	53	.619603186	.120571969	.347234746
.03	.609655604	.0979443995	.3129607	54	.62022171	.121125555	.348030968
.04	.6095689	.0983162545	.313554229	55	.620862874	.121683681	.348832168
.05	.609490282	.0986905489	.314150997	56	.621527097	.122246997	.349638381
.06	.609419919	.099068212	.314751032	57	.622214792	.122814949	.350449638
.07	.609357985	.0994483737	.315354362	58	.622926398	.123387784	.351265973
.08	.609304656	.0998313645	.315961017	59	.623662319	.123965548	.352087415
.09	.609260114	.100217215	.316571027	.6	.624422981	.124548287	.352913994
.1	.609224542	.100605956	.31718442	.61	.625208806	.125136048	.353745739
.11	.609198131	.10099762	.317801227	.62	.626020212	.125728874	.354582675
.12	.609181073	.101392238	.318421478	.63	.626857618	.126326809	.355424829
.13	.609173567	.101789842	.319045204	.64	.627721437	.126929897	.356272223
.14	.609175814	.102190467	.319672436	.65	.62861206	.12753818	.357124981
.15	.609188022	.102594144	.320303206	.66	.629529952	.1281517	.35798280
.16	.609210402	.103000908	.320937545	.67	.630478454	.128770495	.35884601
.17	.60924317	.103410792	.321575485	.68	.631448978	.129394605	.359714616
.18	.609285548	.103823833	.322217058	.69	.632450989	.130024067	.360588501
.19	.609340759	.104240064	.322862288	.7	.633481625	.130658916	.361467725
.2	.609406037	.104665521	.323511238	.71	.634541491	.131299188	.362352298
.21	.609482617	.10508224	.32416391	.72	.635630863	.131944913	.363242204
.22	.609570739	.105508259	.324820349	.73	.636750083	.132596122	.364137505
.23	.60967065	.1059337613	.325480588	.74	.637899462	.133252844	.365038141
.24	.609782682	.106337034	.326144612	.75	.639079374	.133915104	.365944127
.25	.609906852	.106808479	.326812606	.76	.640290057	.134582926	.366855457
.26	.610043853	.107246688	.327484454	.77	.641531814	.135256332	.367772119
.27	.610193303	.107689145	.328160243	.78	.642804907	.135935339	.368694099
.28	.610356044	.10813575	.328840007	.79	.64410958	.136619964	.369621379
.29	.610532168	.108585923	.329523782	.8	.645446057	.13731022	.370553936
.3	.610721959	.109039704	.330211605	.81	.646814538	.138006116	.371491745
.31	.610925708	.109497134	.330903512	.82	.648215203	.138707661	.372434775
.32	.611143713	.109958255	.33159954	.83	.649648206	.139414859	.373382992
.33	.611376275	.110423108	.332299726	.84	.651113679	.140127709	.374336359
.34	.611623704	.110891735	.333004107	.85	.652611725	.140846211	.375294632
.35	.611886314	.111364175	.33371272	.86	.654142423	.141570359	.376258367
.36	.612164427	.111840484	.334425603	.87	.655705827	.142300143	.377226512
.37	.612458368	.112320692	.335142794	.88	.657301962	.143035552	.378200413
.38	.612768471	.112804848	.335864473	.89	.658930826	.143776572	.379178813
.39	.613095074	.113292996	.33659025	.9	.660592392	.144523183	.380162049
.4	.613438521	.113785182	.337320592	.91	.662286602	.145275366	.381150057
.41	.613799163	.114281445	.338055394	.92	.664013375	.146033095	.382142785
.42	.614177357	.114781845	.338794694	.93	.665772601	.146796345	.383140111
.43	.614573464	.115286414	.339538531	.94	.667564147	.147565086	.384142013
.44	.614987251	.115795203	.340286943	.95	.669387653	.148339257	.385148391
.45	.615420891	.116308259	.341039967	.96	.671243537	.149118914	.386159163
.46	.615872964	.116825629	.341797643	.97	.673130993	.149903934	.387174254
.47	.616344453	.117347356	.342560007	.98	.675049996	.150694302	.388193648
.48	.616835745	.117873496	.343327096	.99	.677000307	.151490002	.389217165
.49	.617347235	.118404089	.344098953	1	.678981657	.152290978	.390244764
.5	.61787932	.118939186	.344875609				

A= 2
Z= 8
M= .56
X= .070

Table 12

C	M	X	SQR(X)	C	M	X	SQR(X)
0	.558611457	.0705761864	.265665554	.51	.546519	.0981475952	.313285166
.01	.558653593	.0709716458	.266405416	.52	.549027763	.0988984703	.314481272
.02	.55750303	.0713698297	.267151324	.53	.549586405	.0996666897	.315690887
.03	.55696002	.0717722087	.267903357	.54	.550197085	.100434261	.316913549
.04	.55642462	.0721790544	.268661598	.55	.550862037	.101219679	.318150403
.05	.555897697	.0725904405	.269426132	.56	.551583603	.102017122	.319401194
.06	.555378932	.073006442	.270197043	.57	.552364223	.102826858	.320666272
.07	.554868812	.0734271355	.270974419	.58	.553206433	.103649158	.321945892
.08	.554367638	.0738525995	.271758348	.59	.55411287	.104484429	.323224031
.09	.553875723	.074282914	.27254892	.6	.555086272	.105332562	.324549784
.1	.55339339	.074718161	.273346229	.61	.556129476	.106194236	.325874572
.11	.552920975	.0751584243	.274150368	.62	.557245416	.107069613	.327214934
.12	.552458828	.0756037895	.274961433	.63	.558437122	.107958984	.328571128
.13	.552007314	.0760543444	.275779521	.64	.559707712	.108862654	.329943411
.14	.55156681	.0765101786	.276604733	.65	.561060391	.109780916	.331332853
.15	.551137709	.0769713938	.277437171	.66	.562498435	.110714072	.332737242
.16	.550720422	.0774380538	.278276937	.67	.564025189	.111662242	.334157074
.17	.550315374	.0779102849	.279124139	.68	.565644648	.112626256	.335593358
.18	.549922008	.0783881752	.279978984	.69	.567358441	.113606877	.337054768
.19	.549543756	.0788718255	.280841282	.7	.56917182	.114604361	.338532853
.2	.54917819	.0793613359	.281711446	.71	.571087426	.115618357	.34001998
.21	.548826719	.079856821	.282589492	.72	.573109273	.116648216	.341529235
.22	.548489698	.0803583798	.283475537	.73	.575240115	.117694794	.3430656415
.23	.548168269	.0808661211	.2843697	.74	.577483413	.118758072	.3446261614
.24	.5478624	.0813801734	.285272104	.75	.579842299	.119838131	.346216429
.25	.547572883	.0819006382	.286182875	.76	.582319741	.120934462	.3478346261
.26	.547300336	.0824276393	.287102141	.77	.584918492	.122047414	.3494765494
.27	.547045402	.0829612991	.288030032	.78	.587641856	.1231775104	.3511463109
.28	.546808754	.0835017429	.288966651	.79	.590489636	.124325668	.3528398366
.29	.5465891695	.0840490991	.289912227	.8	.593466095	.12549396	.3545581267
.3	.546383156	.0846034994	.290866807	.81	.596571911	.126680148	.3562921548
.31	.546195704	.085165079	.291830566	.82	.599808137	.127884112	.3580468881
.32	.5460259539	.0857339764	.292803648	.83	.603175372	.129105737	.3598192668
.33	.5458725497	.086310334	.293786205	.84	.606673732	.130344941	.36161033047
.34	.545734452	.0868942977	.294778387	.85	.610302838	.131601266	.3634268807
.35	.5456127316	.0874840173	.295780353	.86	.614061808	.132874686	.36526519802
.36	.5455065045	.0880795846	.296792262	.87	.617949273	.134164809	.3671265147
.37	.545415839	.0886813343	.297814275	.88	.621963396	.135471253	.3690124238
.38	.545340142	.0892992708	.298846567	.89	.626101912	.136794973	.3709248354
.39	.545279647	.0899333594	.299889303	.9	.630362157	.138134721	.372864076
.4	.545234299	.0905834851	.300942661	.91	.63474128	.139489486	.3748347719
.41	.545203294	.0912498119	.30200682	.92	.639236028	.1408592725	.3768383511
.42	.545186286	.0919336768	.303081964	.93	.643843137	.142244522	.3778664054
.43	.545183386	.092634334	.304168282	.94	.648565922	.143645392	.378919229
.44	.545192167	.0933523099	.305265966	.95	.6534051205	.145062071	.3800062098
.45	.545212664	.0940877715	.306375214	.96	.658360563	.1464946213	.3811270432
.46	.5452450383	.0948409295	.307496227	.97	.663433359	.1479430803	.3822820735
.47	.545289287	.0956119966	.308629212	.98	.668625373	.1494075225	.3834725164
.48	.5453454972	.0964011668	.309774381	.99	.673935933	.1508881362	.38469847759
.49	.545413771	.0972087741	.310931948	1	.6793681857	.152384976	.38596044764

Table 13

A= .5
Z= 9
K= .80
X= .305

C	K	X	SQR(X)	C	K	X	SQR(X)
0	.796426056	.303791214	.551172581	.51	.675528224	.19112807	.437161964
.01	.792598099	.300978448	.548615027	.52	.675883342	.18961868	.435452271
.02	.788812772	.298195521	.546072616	.53	.674699044	.188132926	.433742926
.03	.785068578	.295440009	.543543935	.54	.674373372	.186670289	.432053572
.04	.78136435	.292709836	.54102665	.55	.674104394	.185230257	.430383849
.05	.777695241	.29000324	.538519489	.56	.673890221	.1838112327	.428733398
.06	.774072735	.287318754	.536021225	.57	.673729	.182416002	.427101863
.07	.770484641	.284655185	.533530866	.58	.673618922	.181040796	.425488291
.08	.766935095	.282011595	.531047639	.59	.673558225	.179686234	.423894131
.09	.763424558	.279387283	.528570982	.6	.673545193	.178351851	.422317239
.1	.759953817	.276781768	.526106531	.61	.67357816	.17703719	.420757876
.11	.75652357	.274194776	.523636111	.62	.673655509	.175741808	.419215706
.12	.753136424	.271626222	.521177726	.63	.673775669	.174465274	.417690404
.13	.749792676	.269076195	.518725549	.64	.673937126	.173207164	.416181647
.14	.7464953	.266544941	.516279906	.65	.674138409	.171967068	.414689122
.15	.743245919	.264032848	.513841268	.66	.674378099	.170744588	.413212522
.16	.74004718	.261540427	.511410234	.67	.674654826	.169539335	.411751545
.17	.736901723	.259068295	.508987532	.68	.674967264	.168350931	.410303299
.18	.733812344	.256617156	.506573539	.69	.675314138	.167179009	.408875298
.19	.730781955	.254187761	.504170389	.7	.675694217	.166023214	.407459463
.2	.727813536	.251780992	.501777832	.71	.676106311	.164883197	.40605812
.21	.724910099	.249397764	.499397277	.72	.676549278	.163758623	.404671066
.22	.722074632	.247036558	.497029766	.73	.677022015	.162649164	.403297861
.23	.719310059	.244704492	.494676351	.74	.677523461	.161554504	.401938434
.24	.716619194	.242396787	.492338082	.75	.678052393	.160474334	.400592479
.25	.714004694	.24011567	.49001599	.76	.678608428	.159408353	.399259757
.26	.711469027	.237862086	.487711066	.77	.679190016	.158356272	.397940035
.27	.709014435	.235636719	.485424267	.78	.679796447	.157317806	.396633068
.28	.706642905	.233440181	.483156477	.79	.680426842	.156292682	.395338693
.29	.704356148	.231273006	.480908522	.8	.681080355	.155280632	.394056636
.3	.702155583	.229135643	.47868115	.81	.681756174	.154281397	.392786767
.31	.700042326	.227028456	.476475032	.82	.682453515	.153294725	.391528702
.32	.698017187	.224951172	.474290755	.83	.683171625	.152320369	.390282422
.33	.696080673	.222903624	.472128821	.84	.683909778	.151358893	.389047674
.34	.694232992	.220889027	.469989652	.85	.684667276	.150407663	.387824268
.35	.692474048	.218905689	.467870583	.86	.685443445	.149466854	.386612021
.36	.690803554	.216951821	.465780673	.87	.686237639	.148541447	.385410752
.37	.689220851	.215028545	.463711705	.88	.687049233	.147625229	.384220286
.38	.687725127	.213135671	.461666191	.89	.6878777628	.14671999	.383040454
.39	.686315339	.211272952	.459644376	.9	.688722245	.145825528	.381871088
.4	.684990257	.209440097	.457646247	.91	.689582528	.144941647	.380712026
.41	.683748482	.207636725	.455671734	.92	.690457938	.144068154	.37956311
.42	.682588474	.205862452	.453720721	.93	.691347959	.143204863	.378424184
.43	.681508571	.204116954	.451793044	.94	.692252093	.14235159	.377295097
.44	.680507007	.202399666	.449885804	.95	.693169659	.141508159	.376175702
.45	.679581938	.200710155	.448000669	.96	.694100794	.140674395	.375065855
.46	.678731445	.199047926	.446147877	.97	.695044452	.139850131	.373965414
.47	.677953375	.19741248	.444311242	.98	.696000401	.139035201	.372874243
.48	.677246334	.195803295	.442486661	.99	.696968228	.138229445	.371792207
.49	.676607708	.19421985	.4406703812	1	.69794753	.137432708	.370719174
.5	.676035877	.192661617	.4388702361				

A= 1.5
Z= 9
M= .63
X= .067

Table 15

C	M	X	SQR(X)	C	M	X	SQR(X)
0	.630516732	.0672035325	.295302442	51	.638172217	.107724317	.328213629
.01	.630381363	.0675330289	.295659813	52	.638743284	.108218189	.328965331
.02	.63025196	.0678645395	.296420208	53	.639336516	.108716284	.329721525
.03	.630130688	.0681992902	.296983653	54	.639952302	.109218643	.33048244
.04	.630017716	.0685361073	.297550176	55	.640591028	.109725308	.331248106
.05	.629913214	.0688754176	.298119804	56	.641253052	.11023632	.332018553
.06	.629817359	.0692172481	.298692565	57	.641938552	.110751719	.332793809
.07	.62973033	.0695616261	.299268485	58	.642646722	.111271544	.333573899
.08	.62965231	.0699085798	.299847554	59	.643383077	.11179584	.334358849
.09	.629583487	.070258137	.30042992	6	.644142298	.11232464	.335148683
.1	.629524052	.0706103264	.301015452	.61	.644926761	.112857984	.335943423
.11	.629474201	.0709651771	.301604339	.62	.64573684	.11339591	.336743091
.12	.629434135	.0713227183	.30219649	.63	.646572902	.113938453	.337547705
.13	.629404057	.0716829758	.302791975	.64	.647435311	.11448565	.338357282
.14	.629384177	.0720459918	.303390824	.65	.64832442	.115037535	.339171837
.15	.629374765	.0724117849	.303993067	.66	.649240576	.115594141	.339991383
.16	.629375863	.0727803699	.304598736	.67	.650184118	.116155499	.340815931
.17	.629387871	.0731518384	.305207861	.68	.651155375	.116721639	.341645488
.18	.629410956	.0735261621	.305820474	.69	.652154662	.117292591	.342480057
.19	.62944535	.0739033533	.306436606	7	.653182286	.117868381	.343319649
.2	.629491251	.0742835645	.307056289	.71	.654238538	.118449035	.344164257
.21	.629549019	.0746667088	.307679555	.72	.655323696	.119034576	.345013878
.22	.629618782	.0750528598	.308306438	.73	.656438623	.119625025	.345868509
.23	.62970083	.0754420514	.30893697	.74	.657581766	.120220402	.346728138
.24	.629795422	.0758343179	.309571184	.75	.658755152	.120820723	.347592754
.25	.629902817	.076229694	.310209113	.76	.659958393	.121426003	.348462341
.26	.630023285	.0766282151	.310850792	.77	.66119168	.122036284	.349336878
.27	.630157097	.0770299165	.311496254	.78	.662455183	.122651486	.350216342
.28	.630304531	.0774348345	.312145534	.79	.66374905	.123271706	.351100707
.29	.63046587	.0778430034	.312798666	8	.665073411	.123896919	.351989941
.3	.630641481	.0782544662	.313455685	.81	.666428368	.124527125	.352884011
.31	.630831419	.0786692541	.314116625	.82	.667814004	.125162325	.353782878
.32	.631036223	.0790874048	.314781522	.83	.669230373	.125802513	.3546865
.33	.631256117	.0795089624	.315450412	.84	.670677508	.126447684	.355594932
.34	.631491411	.0799339593	.316123329	.85	.672155417	.127097828	.356507823
.35	.631742419	.080362436	.31680031	.86	.673664081	.127752933	.357425423
.36	.632009463	.080794433	.31748139	.87	.675203458	.128412983	.358347573
.37	.632292867	.081229989	.318166605	.88	.676773478	.129077961	.359274214
.38	.632592963	.081669143	.318855991	.89	.67837465	.129747847	.360205285
.39	.632910085	.082111937	.319549525	9	.680008555	.130422618	.361140718
.4	.633244576	.082558641	.320247421	.91	.681684353	.13110225	.362080447
.41	.63359678	.083009604	.320949535	.92	.683395781	.131786715	.3630244
.42	.633967047	.083465256	.321655965	.93	.685139151	.132475984	.363972564
.43	.634355733	.083926319	.322366746	.94	.6869160257	.133170027	.364924687
.44	.634763197	.0843928922	.323081912	.95	.688726673	.133868833	.365880872
.45	.635189802	.0848650412	.323801501	.96	.690570755	.134572308	.366840984
.46	.635635916	.085342857	.324525345	.97	.692448643	.135280478	.367804946
.47	.63610161	.085826218	.325254082	.98	.694360261	.135993329	.368772681
.48	.636588158	.08631519	.325987145	.99	.696306322	.136710711	.369744116
.49	.637095038	.086809874	.326724768	1	.69754753	.137432786	.370719174
.5	.63762293	.0873103624	.327466985				

A= 2
 Z= 9
 M= .58
 X= .063

Table 16

C	M	X	SDR(X)	C	M	X	SDR(X)
0	.579785827	.0634466025	.251886487	51	.56772018	.0884139838	.29734489
.01	.579167361	.0638027472	.252592057	52	.568234065	.0890955068	.298488705
.02	.578556567	.0641626143	.253303404	53	.568900748	.0897873563	.299645384
.03	.57795377	.0645264679	.254020605	54	.569422391	.0904897619	.300815162
.04	.577359189	.0648943734	.254743741	55	.570101323	.0912029586	.301998276
.05	.576773128	.0652663979	.255472891	56	.570839945	.0919271868	.303194965
.06	.576195888	.0656426096	.256206137	57	.571640746	.0926626916	.304405472
.07	.575627777	.0660230786	.256949564	58	.572506308	.0934097231	.305630043
.08	.575069117	.0664076764	.257697257	59	.573439297	.0941685354	.3068688922
.09	.574520241	.0667970762	.258451303	6	.574442469	.0949393869	.308122357
.1	.573981497	.0671907527	.259211791	61	.575518659	.0957225391	.309390593
.11	.573453243	.0675889824	.259978811	62	.576670783	.096518256	.310673874
.12	.572935856	.0679916437	.260752457	63	.577901826	.0973268037	.311972441
.13	.572429723	.0683994166	.261532821	64	.579214838	.0981484485	.313286528
.14	.571935251	.0688117831	.262320001	65	.579214838	.0989834567	.314616364
.15	.571452861	.0692290272	.263114095	66	.580612922	.0998326923	.315962169
.16	.570982989	.0696512347	.263915204	67	.583676895	.100694616	.31732415
.17	.570526094	.0700764934	.264723428	68	.585349129	.101571262	.318702498
.18	.570082648	.0705108936	.265538874	69	.58711908	.102462339	.32009739
.19	.569653147	.07094485275	.266361648	7	.588989874	.103368024	.321508979
.2	.569236105	.0713914894	.267191659	71	.590964572	.10428856	.322937394
.21	.568838058	.0718398764	.268029619	72	.593046142	.105224158	.324382734
.22	.568453565	.0722937874	.268875041	73	.595237422	.106175006	.325845065
.23	.5680885208	.0727533243	.269728242	74	.597541091	.107141073	.327324416
.24	.567733595	.0732185912	.270589341	75	.599959827	.1081201	.328820772
.25	.567399357	.0736896951	.271458459	76	.602495266	.109120595	.330334072
.26	.5670803156	.0741667454	.272335722	77	.605149964	.11013385	.331864204
.27	.566785679	.0746498547	.273221256	78	.607925359	.111162896	.333411001
.28	.566507646	.075139138	.274115191	79	.610822729	.112207739	.334974236
.29	.566249806	.0756347139	.275017661	8	.613842959	.11326634	.336553521
.3	.566012942	.0761367037	.275928802	81	.616986512	.114344616	.338148867
.31	.565797871	.0766452319	.276848753	82	.620253402	.115436437	.339759382
.32	.5656005447	.0771604265	.277777657	83	.623643184	.116543629	.34138487
.33	.565436561	.0776824187	.278715659	84	.627154946	.117665973	.34302474
.34	.565292146	.0782113435	.279662911	85	.630787318	.118803205	.344678408
.35	.565173172	.0787473394	.280619563	86	.634538489	.119955028	.346345243
.36	.565068659	.0792905484	.281585775	87	.638406243	.121121108	.34802458
.37	.565015667	.0798411169	.282561705	88	.642387999	.12230109	.349715728
.38	.564979309	.0803991951	.283547516	89	.646480876	.123494602	.351417988
.39	.564972746	.080964937	.284543383	9	.650681756	.124701267	.353130666
.4	.56499719	.0815385013	.285549473	91	.654987366	.125920715	.35485309
.41	.565053912	.082120051	.286565963	92	.659394365	.127152599	.356584631
.42	.565144237	.0827097535	.287593035	93	.66389943	.128396606	.358324721
.43	.565269554	.083307781	.288630873	94	.668499352	.129652474	.360072873
.44	.565431311	.0839143163	.289679668	95	.673191125	.130920009	.3618297
.45	.565631025	.0845295233	.290739614	96	.677972036	.132199099	.36359194
.46	.5658670278	.0851536066	.291810909	97	.68283975	.133489736	.365362472
.47	.566150725	.0857867525	.292893756	98	.68779238	.134792027	.367140338
.48	.566474095	.0864291579	.293988364	99	.692820566	.136106218	.368925762
.49	.566842191	.0870810254	.295094943	1	.69794753	.137432706	.370719174
.5	.567256658	.0877425629	.296213712				

A= .5
Z= 10
M= .81
X= .278

Table 17

C	M	X	SQR(X)	C	M	X	SQR(X)
0	.809228142	.277990497	.527248042	51	.691133583	.1748683	.418172572
.01	.805598656	.275437125	.524821041	52	.690661546	.173473045	.416500958
.02	.802008498	.272911742	.522406954	53	.690252119	.172099908	.414849259
.03	.798456082	.270411987	.520011526	54	.689903415	.170748406	.413217141
.04	.794940101	.267935808	.517625162	55	.689613557	.169418072	.411604266
.05	.791459525	.265481437	.515248908	56	.689380493	.168108844	.410010292
.06	.788013361	.263047369	.512861437	57	.689202998	.166819065	.408434879
.07	.784601894	.260632344	.510521639	58	.689078677	.165549449	.406877683
.08	.781224204	.258235332	.508166666	59	.689005971	.164299191	.405338367
.09	.777880658	.255855517	.505821626	6	.688983161	.16306784	.403816592
.1	.774571661	.253492283	.503480172	61	.689008566	.161854967	.402312027
.11	.771297912	.251145204	.501143896	62	.689080551	.160660153	.400824341
.12	.768060396	.248814028	.498812618	63	.689197524	.159482989	.399353213
.13	.76486038	.246498669	.496486323	64	.689357937	.158323076	.397898323
.14	.7616994	.244199192	.494165146	65	.689560289	.157180024	.39645976
.15	.758579257	.2419158	.491849367	66	.689803124	.156053435	.395036018
.16	.755501952	.239648824	.489539399	67	.690085032	.134943	.393627957
.17	.752469868	.237398704	.487235779	68	.690406648	.153848299	.392235005
.18	.749485345	.23516598	.484939151	69	.690760654	.152769003	.390858755
.19	.746551047	.232951274	.48265026	7	.691151774	.151704772	.389492968
.2	.7436669734	.230755273	.480369933	71	.691576776	.150655277	.388143372
.21	.74084426	.228578716	.478099065	72	.692034472	.149620197	.3868077
.22	.738077535	.226422377	.475838604	73	.692523713	.14859922	.385485694
.23	.735372482	.224287048	.473589536	74	.693043393	.147592044	.3841771
.24	.732732	.222173524	.471352866	75	.693592445	.146598376	.382881673
.25	.730158912	.220082588	.469129607	76	.694169038	.145617929	.381599173
.26	.727655934	.218014958	.466920762	77	.694774583	.144650427	.380329367
.27	.72522563	.215971473	.464727311	78	.695405722	.143695601	.379072026
.28	.722870379	.213952685	.462550197	79	.696062335	.142753189	.37782693
.29	.720592347	.211959244	.460390317	8	.696743533	.141822937	.376593862
.3	.718393457	.2099951896	.458248509	81	.697448463	.140904599	.375372614
.31	.716275373	.208050515	.456125546	82	.698176295	.139997936	.37416298
.32	.714239481	.206136099	.454022135	83	.69892625	.139102713	.372964762
.33	.712286886	.204248767	.451938297	84	.69969755	.138218701	.371777765
.34	.710418402	.20238876	.449876383	85	.700489464	.137345695	.370601801
.35	.708634558	.200556243	.447835063	86	.701301281	.136483464	.369436655
.36	.706935606	.198751304	.445815325	87	.702132319	.135631807	.368282239
.37	.705321526	.196973959	.443817484	88	.702981918	.134790522	.367138287
.38	.703792046	.195224156	.441841777	89	.703849446	.133959411	.36600466
.39	.70234665	.193501781	.439886873	9	.704734289	.133138284	.364881192
.4	.700984608	.191806661	.437957374	91	.705635859	.132326954	.36376772
.41	.699704985	.190138571	.436048818	92	.70655359	.13152524	.362664087
.42	.698506669	.18849724	.434162689	93	.707486931	.130732965	.361570139
.43	.697388386	.186882355	.432298918	94	.708435357	.129949355	.360486726
.44	.696348725	.185293567	.430457353	95	.709398357	.129176052	.359414702
.45	.695386155	.183730498	.428637957	96	.710375442	.128411053	.358344922
.46	.694495943	.182192743	.426840419	97	.711366139	.127654653	.357288249
.47	.693688592	.180679577	.425064557	98	.71236999	.126907327	.356240546
.48	.692944309	.179191459	.423310122	99	.713386555	.126168233	.355201679
.49	.692273075	.177727034	.421576842	1	.71441541	.125437465	.354171519
.5	.691670127	.176286137	.419864427				

Table 18

A= 1
Z= 10
M= .71
X= .125

C	M	X	SQR(X)	C	M	X	SQR(X)
0	.714415411	.125437465	.354171519	51	.714415411	.125437465	.354171519
.01	.71441541	.125437465	.354171519	52	.71441541	.125437465	.354171519
.02	.71441541	.125437465	.354171519	53	.714415411	.125437465	.354171519
.03	.714415411	.125437465	.354171519	54	.71441541	.125437465	.354171519
.04	.714415411	.125437465	.354171519	55	.714415411	.125437465	.354171519
.05	.71441541	.125437465	.354171519	56	.71441541	.125437465	.354171519
.06	.71441541	.125437465	.354171519	57	.714415411	.125437465	.354171519
.07	.714415411	.125437465	.354171519	58	.71441541	.125437465	.354171519
.08	.714415411	.125437465	.354171519	59	.714415411	.125437465	.354171519
.09	.71441541	.125437465	.354171519	.6	.71441541	.125437465	.354171519
.1	.71441541	.125437465	.354171519	.61	.714415411	.125437465	.354171519
.11	.71441541	.125437465	.354171519	.62	.71441541	.125437465	.354171519
.12	.714415411	.125437465	.354171519	.63	.714415411	.125437465	.354171519
.13	.71441541	.125437465	.354171519	.64	.71441541	.125437465	.354171519
.14	.71441541	.125437465	.354171519	.65	.714415411	.125437465	.354171519
.15	.714415411	.125437465	.354171519	.66	.71441541	.125437465	.354171519
.16	.714415411	.125437465	.354171519	.67	.71441541	.125437465	.354171519
.17	.71441541	.125437465	.354171519	.68	.71441541	.125437465	.354171519
.18	.714415411	.125437465	.354171519	.69	.714415411	.125437465	.354171519
.19	.71441541	.125437465	.354171519	.7	.71441541	.125437465	.354171519
.2	.714415411	.125437465	.354171519	.71	.714415411	.125437465	.354171519
.21	.714415411	.125437465	.354171519	.72	.71441541	.125437465	.354171519
.22	.71441541	.125437465	.354171519	.73	.714415411	.125437465	.354171519
.23	.71441541	.125437465	.354171519	.74	.71441541	.125437465	.354171519
.24	.71441541	.125437465	.354171519	.75	.714415411	.125437465	.354171519
.25	.714415411	.125437465	.354171519	.76	.71441541	.125437465	.354171519
.26	.71441541	.125437465	.354171519	.77	.71441541	.125437465	.354171519
.27	.714415411	.125437465	.354171519	.78	.71441541	.125437465	.354171519
.28	.714415411	.125437465	.354171519	.79	.71441541	.125437465	.354171519
.29	.71441541	.125437465	.354171519	.8	.71441541	.125437465	.354171519
.3	.714415411	.125437465	.354171519	.81	.71441541	.125437465	.354171519
.31	.71441541	.125437465	.354171519	.82	.71441541	.125437465	.354171519
.32	.71441541	.125437465	.354171519	.83	.714415411	.125437465	.354171519
.33	.71441541	.125437465	.354171519	.84	.71441541	.125437465	.354171519
.34	.71441541	.125437465	.354171519	.85	.71441541	.125437465	.354171519
.35	.71441541	.125437465	.354171519	.86	.71441541	.125437465	.354171519
.36	.71441541	.125437465	.354171519	.87	.714415411	.125437465	.354171519
.37	.71441541	.125437465	.354171519	.88	.71441541	.125437465	.354171519
.38	.71441541	.125437465	.354171519	.89	.714415411	.125437465	.354171519
.39	.71441541	.125437465	.354171519	.9	.71441541	.125437465	.354171519
.4	.71441541	.125437465	.354171519	.91	.714415411	.125437465	.354171519
.41	.71441541	.125437465	.354171519	.92	.71441541	.125437465	.354171519
.42	.71441541	.125437465	.354171519	.93	.714415411	.125437465	.354171519
.43	.71441541	.125437465	.354171519	.94	.714415411	.125437465	.354171519
.44	.714415411	.125437465	.354171519	.95	.71441541	.125437465	.354171519
.45	.71441541	.125437465	.354171519	.96	.714415411	.125437465	.354171519
.46	.714415411	.125437465	.354171519	.97	.71441541	.125437465	.354171519
.47	.71441541	.125437465	.354171519	.98	.714415411	.125437465	.354171519
.48	.714415411	.125437465	.354171519	.99	.71441541	.125437465	.354171519
.49	.71441541	.125437465	.354171519	1	.714415411	.125437465	.354171519
.5	.714415411	.125437465	.354171519				

A= 1.5
Z= 10
M= .65
X= .079

Table 19

C	M	X	SDR(X)	C	M	X	SDR(X)
0	.645584587	.0794398227	.28185071	.51	.655520318	.0982504083	.313449212
.01	.648422886	.0797415451	.282385455	.52	.656027796	.0987034066	.314171101
.02	.648269495	.0800454685	.282923114	.53	.656677665	.0991604228	.314897489
.03	.648124565	.0803516772	.283463714	.54	.657290283	.0996212893	.315626404
.04	.64798833	.0806601353	.28400728	.55	.657926007	.100086098	.31636367
.05	.647860907	.0809708877	.28455384	.56	.658585194	.100554891	.317103911
.06	.647742496	.0812839597	.285103419	.57	.659268194	.101027702	.317848552
.07	.647633284	.0815993764	.285656046	.58	.659975358	.101504566	.318597813
.08	.647533458	.0819171638	.286211747	.59	.660707027	.101985518	.319351715
.09	.647443212	.0822373482	.28677055	.6	.661463543	.102470589	.320110276
.1	.647362743	.0825599558	.287332483	.61	.662245238	.102959811	.320873513
.11	.647292251	.0828850138	.287897575	.62	.663052437	.103453217	.321641441
.12	.647231942	.0832125492	.288465855	.63	.66388546	.103950834	.322414073
.13	.647182025	.0835425697	.28903735	.64	.664744616	.104452693	.323191419
.14	.647142715	.0838751632	.289612091	.65	.665630206	.104958821	.323973499
.15	.647114228	.0842102982	.290190107	.66	.66654252	.105469244	.324760267
.16	.647096786	.0845480233	.290771426	.67	.667481835	.105983997	.325551815
.17	.647090622	.0848883677	.291356684	.68	.668448417	.106503072	.326348058
.18	.647095962	.0852313607	.291944105	.69	.66944252	.107026523	.327149050
.19	.647113043	.0855770323	.292533523	.7	.67046438	.107554357	.327954809
.2	.647142107	.0859254128	.293130368	.71	.671514222	.108086593	.328765256
.21	.6471834	.0862765327	.293728672	.72	.672592251	.108623246	.329580412
.22	.64723717	.086630423	.294330466	.73	.673698457	.109164335	.330400265
.23	.647303675	.0869871153	.294935782	.74	.67483361	.109709866	.331224797
.24	.647383174	.0873466411	.295544652	.75	.675997263	.110259851	.332053988
.25	.647475531	.0877090326	.296157108	.76	.677189747	.110814297	.3328857814
.26	.647582216	.0880743226	.296773184	.77	.678411173	.111373209	.333728249
.27	.647702304	.0884425435	.297392911	.78	.679661633	.11193659	.33458126
.28	.647836473	.0888137289	.298016323	.79	.680941154	.11250444	.335444815
.29	.647985069	.0891879125	.2986443454	.8	.682249902	.113076757	.336268876
.3	.6481482	.089565128	.299274336	.81	.683587779	.113653536	.337125401
.31	.648326341	.0899454099	.299909003	.82	.684954826	.11423477	.337986345
.32	.648519729	.0903287929	.300547489	.83	.686351018	.114820449	.338851662
.33	.648728668	.0907153119	.301189827	.84	.687776307	.115410561	.339721299
.34	.648953467	.0911050024	.301836052	.85	.689230625	.116005092	.340595202
.35	.649194438	.0914978998	.302486198	.86	.690713876	.116604024	.341473313
.36	.649451899	.0918946403	.303140298	.87	.692225944	.117207338	.342355573
.37	.64972617	.0922934599	.303798387	.88	.693766689	.117815014	.343241918
.38	.650017579	.0926961952	.304460499	.89	.695335951	.118427028	.344132282
.39	.650326451	.0931022834	.305126668	.9	.696933546	.119043354	.345026599
.4	.650653131	.0935117596	.305796926	.91	.698559278	.119663967	.345924799
.41	.650997946	.0939246632	.306471309	.92	.70021292	.120288838	.346826812
.42	.651361242	.0943416305	.30714985	.93	.701894237	.120917937	.347732566
.43	.651743364	.0947608989	.307832583	.94	.703602975	.121551235	.348641587
.44	.652144658	.0951843062	.308519539	.95	.705338845	.122188701	.349553004
.45	.652565477	.0956112899	.309210753	.96	.707101825	.122830303	.3504671544
.46	.653006173	.0960416378	.309906257	.97	.708890954	.123476011	.351391535
.47	.653467103	.09647461377	.310606081	.98	.710706581	.124125793	.3523314907
.48	.653948623	.0969106772	.311310259	.99	.712548167	.124779621	.35324159
.49	.654451092	.0973587438	.31201882				
.5	.65497487	.0978011751	.312731794				

A= 2
 Z= 10
 M= .60
 X= .057

Table 20

C	M	X	SQR(X)	C	M	X	SQR(X)
0	.598562886	.0577136274	.240236607				
.01	.597689003	.0580390779	.240913009	.51	.584777949	.0805783514	.283863262
.02	.597223216	.0583681253	.241594961	.52	.585300023	.0812039255	.284963025
.03	.59656581	.0587008284	.242292538	.53	.585877483	.0818390724	.286075292
.04	.595917077	.0590372478	.242975817	.54	.586512595	.0824840066	.28720029
.05	.595277323	.0593774452	.243674876	.55	.587207714	.083138947	.288338251
.06	.594646867	.0597214836	.244379794	.56	.587965269	.0838041171	.289489408
.07	.594026635	.0600694277	.245090652	.57	.588767775	.0844797443	.290653954
.08	.593415171	.0604213435	.245807534	.58	.58967782	.0851660596	.291832246
.09	.59281463	.0607772925	.246530522	.59	.590638067	.0858632974	.293024397
.1	.59222478	.0611373618	.247259705	.6	.591671248	.0865716946	.294230683
.11	.591646603	.0615016041	.24799517	.61	.59278016	.0872914898	.295451332
.12	.5910787	.0618700978	.248737005	.62	.593967651	.0880229227	.296686573
.13	.590523283	.062242917	.249485304	.63	.595236619	.0887662329	.297936626
.14	.589980184	.0626201376	.25024016	.64	.59658999	.0895216588	.299201703
.15	.589449849	.0630018371	.251001668	.65	.598030714	.0902894361	.300482706
.16	.588932746	.0633880951	.251769925	.66	.599561743	.0910697959	.301779726
.17	.588429358	.0637778931	.252545032	.67	.601186612	.0918629566	.303093002
.18	.587940191	.0641746146	.25332709	.68	.602906642	.092669156	.304423609
.19	.587465769	.0645750451	.254116204	.69	.604725804	.0934885797	.305770602
.2	.587006639	.0649803722	.25491240	.7	.606646909	.094321428	.307134938
.21	.586563372	.0653906858	.255716026	.71	.608672363	.0951678784	.308517915
.22	.58613656	.0658060781	.256526954	.72	.61080464	.0960280898	.309919734
.23	.585726822	.0662266434	.257345376	.73	.61304603	.0969021994	.311340481
.24	.585334882	.0666524787	.258171413	.74	.615398599	.097790319	.312779337
.25	.584961172	.0670836835	.25900518	.75	.617864153	.0986925328	.314236677
.26	.584606633	.0675203595	.2598468	.76	.620444206	.0996088933	.315712766
.27	.584271914	.0679626116	.260696397	.77	.623139937	.100539419	.317207918
.28	.583957779	.068410547	.2615541	.78	.625952166	.101484092	.318722567
.29	.583665021	.0688642762	.262420038	.79	.628881319	.102442855	.320256953
.3	.58339447	.0693239123	.263294345	.8	.631927409	.103415611	.321810276
.31	.583146991	.0697895716	.26417716	.81	.635090019	.104402221	.323382626
.32	.582923489	.0702613735	.26506862	.82	.638368294	.105402509	.324974252
.33	.582724905	.0707394408	.265968872	.83	.641760948	.106416255	.326585041
.34	.582552225	.0712238993	.266878061	.84	.645266271	.107443208	.327785306
.35	.582406476	.0717148978	.267796338	.85	.6488852165	.108483081	.329367689
.36	.582288732	.0722125123	.268723859	.86	.652606169	.109535563	.33096157
.37	.582200114	.0727169366	.269660781	.87	.6564335515	.110600323	.33256626
.38	.582141792	.0732282925	.270607266	.88	.660367188	.111677018	.33418111
.39	.582114991	.0737467244	.271563481	.89	.664397988	.112765304	.33580545
.4	.582120984	.074272381	.272529597	.9	.668524606	.113864847	.33743866
.41	.582161107	.0748054153	.273505787	.91	.672743708	.114975333	.33908012
.42	.582236752	.0753459842	.27449223	.92	.677052012	.116096482	.34072933
.43	.582349372	.0758942493	.275489169	.93	.681446371	.11722806	.34238563
.44	.582500484	.0764503767	.276496612	.94	.685923857	.118369892	.34404921
.45	.582691671	.077014537	.277514931	.95	.69048183	.119521877	.345721501
.46	.582924585	.0775869057	.278544262	.96	.695118014	.120684002	.34739801
.47	.583200949	.0781676626	.279584204	.97	.69983056	.121856353	.349079201
.48	.583522558	.0787569935	.280636764	.98	.704618101	.123039135	.350765301
.49	.583891263	.0793550678	.281700351	.99	.709479804	.124232675	.352466501
.5	.584309071	.0799621464	.282775778	1	.71441541	.125437465	.3541715