

INSTRUCTION:

This section consists of **FOUR (4)** structured questions. Answer **ALL** questions.

ARAHAN:

Bahagian ini mengandungi EMPAT (4) soalan struktur. Jawab SEMUA soalan.

QUESTION 1**SOALAN 1**

CLO 1
C1

- a) Differentiate these equations:
Bezakan persamaan berikut:

i. $y = x^2(2x + 8)$

[7 marks]
[7 markah]

ii. $y = \sqrt{4x + 9}$

[8 marks]
[8 markah]

CLO 1
C2

- b) The demand for an item produced by Jazzella is given by $p + 0.2x = 100$ with p is the price per unit and x is the quantity demanded. The total cost, $C(x)$ of producing x units of the item is given by $C(x) = 800 + 30x$ with x is the level of output. Calculate:

Permintaan terhadap item yang dikeluarkan oleh Jazzella ialah $p + 0.2x = 100$ dengan p adalah harga per unit dan x ialah kuantiti yang diminta. Jumlah kos, $C(x)$ menghasilkan unit x adalah $C(x) = 800 + 30x$ dengan x ialah tahap keluaran. Kira:

- i. The total revenue function.

Fungsi jumlah hasil.

[2 marks]
[2 markah]

- ii. The total profit function.

Fungsi jumlah untung.

[2 marks]
[2 markah]

- iii. The level of production in unit which will maximize the profit.

Tahap pengeluaran dalam unit yang dapat memaksimumkan keuntungan.

[4 marks]
[4 markah]

- iv. Based on answer from the question b (iii), find the level of selling price.

Berdasarkan jawapan bagi soalan b (iii), dapatkan harga paras jualan.

[2 marks]
[2 markah]

QUESTION 2

SOALAN 2

Abdul Fattah is the Financial Planner at SUMEGAH Sdn. Bhd. He was asked to evaluate two investment projects and then present the result to his top management on which project would profit the most. He named them as Project K and Project L. Both projects will cost RM 750,000. The estimated cash flow for the projects is given as follows:

Abdul Fattah adalah Perancang Kewangan di SUMEGAH Sdn Bhd. Beliau diminta untuk menilai dua projek pelaburan dan kemudian membentangkan hasilnya kepada pihak pengurusan atasan projek yang manakah paling menguntungkan. Projek itu dinamakan sebagai Projek K dan Projek L. Kedua-dua projek melibatkan kos sebanyak RM 750,000. Anggaran aliran tunai masuk bagi projek-projek tersebut adalah seperti yang tertera:

	Year	1	2	3	4	5
Cash Inflow (RM)	Project K	-	230,000	250,000	310,000	340,000
	Project L	180,000	200,000	240,000	260,000	280,000

CLO 1
C2

a) Calculate the following elements for both projects:

Kirakan elemen yang berikut bagi kedua-dua projek:

i. Payback Period

Tempoh Bayar Balik[4 marks]
[4 markah]

ii. Net Present Value if the cost of capital is 12%.

Nilai Kini Bersih jika kos modal adalah sebanyak 12%.[8 marks]
[8 markah]

iii. Profitability Index

Indeks Keberuntungan[3 marks]
[3 markah]CLO 1
C3

b) Calculate and determine:

Kirakan dan tentukan:

i. Average Rate of Return

Kadar Pulangan Purata[8 marks]
[8 markah]

ii. Based on the evaluation, which project should Abdul Fattah propose to the top management? Why?

Berdasarkan penilaian, projek manakah yang patut diusulkan Abdul Fattah kepada pengurusan atasan untuk dipilih? Mengapa?[2 marks]
[2 marks]

QUESTION 3
SOALAN 3

a)

No. 002309

23rd September 2017

Sixty days after date I promise to pay to the order of **Ella**, Ringgit Malaysia: **Six Thousand Only** for value received with interest at the rate of **10%** per annum until paid.

Fiona
Fiona

No. 002309

23hb September 2017

Enam puluh hari selepas tarikh ini saya berjanji untuk membayar **Ella**, Ringgit Malaysia: **Enam Ribu Sahaja**, di mana nilai ini akan mendapat faedah sebanyak **10%** setahun sehingga ianya dibayar.

Fiona
Fiona

CLO 2
C2

From the information, determine (use exact time method);
Berdasarkan maklumat di atas, tentukan (gunakan kaedah masa tepat);

- i. The maturity date of the note.

Tarikh matang nota janji ini.

[1 mark]
[1 markah]

- ii. The interest of the note.

Jumlah faedah bagi nota janji ini.

[2 marks]
[2 markah]

- iii. The maturity value.

Jumlah matang bagi nota janji ini.

[2 marks]
[2 marks]

- iv. Calculate the proceed value received by Ella if she sells the note to a bank which discounts it at 12% per annum on the 15th November 2017.

Kirakan hasil yang diperoleh oleh Ella jika beliau menjual nota janji berkenaan kepada bank yang mengenakan kadar diskaun 12% setahun pada 15hb November 2017.

[5 marks]
[5 markah]

CLO 2
C3

- b) Maryam bought a refrigerator listed at RM800 cash through an instalment plan. She paid RM100 as a down payment. The balance was settled by making 10 monthly instalments. If the interest rate charged was 8.5% per annum on the original balance, find:

Maryam telah membeli sebuah peti sejuk pada harga RM800 secara pelan bayaran ansuran. Beliau membayar RM100 sebagai wang pendahuluan. Bakinya akan dijelaskan secara ansuran selama 10 bulan. Jika kadar faedah berdasarkan baki sebenar adalah 8.5% setahun, kirakan:

- i. The total interest charged.

Jumlah faedah yang dikenakan.

[4 marks]
[4 markah]

- ii. The instalment price.

Jumlah ansuran.

[3 marks]
[3 markah]

- iii. Monthly payment.

Bayaran bulanan.

[3 marks]
[3 markah]

- iv. Determine the outstanding balance if she wishes to settle all her debts after the third payment.

Tentukan baki tunggakan jika beliau ingin menyelesaikan semua hutang selepas bayaran ketiga.

[5 marks]
[5 markah]

QUESTION 4**SOALAN 4**

NAJ Hijabs produces shawl located in Senawang, Kulim and Dungun. These three suppliers are able to supply to another four agents who are located in Muar, Putrajaya, Ipoh and Jeli. The followings are number of shawl available in each branch and number of items needed by each agent:

NAJ Hijabs mengeluarkan selendang yang terletak di Senawang, Kulim dan Dungun. Ketiga-tiga cawangan ini mampu membekalkan kepada empat agen yang berada di Muar, Putrajaya, Ipoh dan Jeli. Berikut adalah bilangan selendang yang ada di setiap cawangan dan bilangan item yang diperlukan bagi setiap agen :

<u>Branch / Cawangan (units/unit)</u>		<u>Agents / Agen (units / unit)</u>	
Senawang	: 8,000	Muar	: 5,500
Kulim	: 7,500	Putrajaya	: 7,000
Dungun	: 7,000	Ipoh	: 4,000
		Jeli	: 6,000

The table below shows the transportation cost per unit (in RM) from all branches to agents:
Jadual di bawah menunjukkan kos pengangkutan seunit dari setiap cawangan kepada agen-agen:

To / Ke From / Dari	Muar	Putrajaya	Ipoh	Jeli
Senawang	3	2	5	7
Kulim	7	8	3	6
Dungun	9	7	5	4

Based on the information given:
Berdasarkan maklumat diberikan:

CLO 2
C1

- a. Draw a matrix table.
Lukiskan jadual matriks.

[5 marks]
[5 markah]

CLO 2
C2

- b. Transportation cost by using Least Cost Method
Kos pengangkutan menggunakan Kaedah Kos Minima.

[5 marks]
[5 markah]

CLO 2
C3

- c. An optimal cost by using the Stepping Stone Method.
Kos pengangkutan paling optima menggunakan Kaedah Batu Loncatan.

[15 marks]
[15 markah]

SOALAN TAMAT

FORMULA BUSINESS MATHEMATIC

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$P = pQ - VCQ - FC$$

$$P = TR - TC$$

$$TC = VCQ + FC$$

$$TR = pQ$$

$$TVC = VCQ$$

$$BEP(Q) = \frac{FC}{p - VC}$$

$$BEP(RM) = BEP(Q) \times p$$

$$CM = p - VC$$

$$CMR = \frac{p - VC}{p} \times 100$$

$$\frac{dy}{dx} = nx^{n-1}$$

$$\frac{dy}{dx} = nx^{n-1} + 0$$

$$\frac{dy}{dx} = anx^{n-1}$$

$$\frac{dy}{dx} = anx^{n-1} + bmx^{m-1}$$

$$\frac{dy}{dx} = u \frac{dv}{dx} + v \frac{du}{dx}$$

$$\frac{dy}{dx} = \frac{v \frac{du}{dx} - u \frac{dv}{dx}}{v^2}$$

$$\frac{dy}{dx} = \frac{dy}{du} \times \frac{du}{dx}$$

$$I = Prt$$

$$I = IP - CP$$

$$I = \left(\frac{Pr + Yr}{2}\right)t \quad \text{or} \quad I = Pr\left(\frac{t+1}{2}\right)$$

$$Y = \frac{P}{t}$$

$$DP = \text{Rate } (\%) \times CP$$

$$P = CP - DP + \text{other payments}$$

$$S = P + I$$

$$S = P(1 + rt)$$

$$D = Sdt$$

$$H = S - D$$

$$MP = \frac{S}{n}$$

$$IP = DP + (MP \times n) @ DP + S @ DP + P + I$$

$$R = \frac{\sum n}{\sum N} \times I \quad \text{and} \quad \sum n = \left(\frac{n+1}{2}\right)n, \quad \sum N = \left(\frac{N+1}{2}\right)N$$

$$EP = (n \times MP) - R$$

$$S = P\left(1 + \frac{i}{m}\right)^{n.m}$$

$$P = \frac{S}{\left(1 + \frac{i}{m}\right)^{n.m}}$$

$$P = R \left(\frac{1 - \left(1 + \frac{i}{m}\right)^{-n.m}}{\frac{i}{m}} \right) \quad \text{and} \quad R = \frac{P\left(\frac{i}{m}\right)}{1 - \left(1 + \frac{i}{m}\right)^{-n.m}}$$

$$S = R \left(\frac{\left(1 + \frac{i}{m}\right)^{n.m} - 1}{\frac{i}{m}} \right) \quad \text{and} \quad R = \frac{S\left(\frac{i}{m}\right)}{\left(1 + \frac{i}{m}\right)^{n.m} - 1}$$

$$PP = \frac{IO}{ACF}$$

$$PP = T + \frac{IO - \sum ACF_T}{ACF_{T+1}}$$

$$ARR = \frac{\text{Average ACF} - \text{Dep.}}{IO} \times 100$$

$$NPV = ACF(PVIFA, k\%, n) - IO$$

$$PI = \frac{PV}{IO}$$

Present Value and Future Value Tables

Table A-3 Present value interest factors One-Dollar Discounted at k percent for n periods: $PVIF_{k,n} = \frac{1}{(1+k)^n}$

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	24%	25%	30%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.9009	0.8929	0.8850	0.8772	0.8696	0.8621	0.8547	0.8475	0.8403	0.8333	0.8065	0.8000	0.7692
2	0.9803	0.9612	0.9426	0.9246	0.9070	0.8900	0.8734	0.8573	0.8417	0.8264	0.8116	0.7972	0.7831	0.7695	0.7561	0.7432	0.7305	0.7182	0.7062	0.6944	0.6504	0.6400	0.5917
3	0.9705	0.9423	0.9151	0.8890	0.8638	0.8396	0.8163	0.7938	0.7722	0.7513	0.7312	0.7118	0.6931	0.6750	0.6575	0.6407	0.6244	0.6086	0.5934	0.5787	0.5245	0.5120	0.4552
4	0.9610	0.9238	0.8885	0.8548	0.8227	0.7921	0.7629	0.7350	0.7084	0.6830	0.6587	0.6355	0.6133	0.5921	0.5718	0.5523	0.5337	0.5158	0.4987	0.4823	0.4230	0.4096	0.3501
5	0.9515	0.9057	0.8626	0.8219	0.7835	0.7473	0.7130	0.6806	0.6499	0.6209	0.5935	0.5674	0.5428	0.5194	0.4972	0.4761	0.4561	0.4371	0.4190	0.4019	0.3411	0.3277	0.2693
6	0.9420	0.8880	0.8375	0.7903	0.7462	0.7050	0.6663	0.6302	0.5963	0.5645	0.5346	0.5066	0.4803	0.4566	0.4323	0.4104	0.3898	0.3704	0.3521	0.3349	0.2751	0.2621	0.2072
7	0.9327	0.8706	0.8131	0.7599	0.7107	0.6651	0.6227	0.5835	0.5470	0.5132	0.4817	0.4523	0.4251	0.3996	0.3759	0.3538	0.3332	0.3139	0.2959	0.2791	0.2218	0.2097	0.1594
8	0.9235	0.8535	0.7894	0.7307	0.6768	0.6274	0.5820	0.5403	0.5019	0.4665	0.4339	0.4039	0.3762	0.3506	0.3269	0.3050	0.2848	0.2660	0.2487	0.2329	0.1789	0.1678	0.1226
9	0.9143	0.8368	0.7664	0.7026	0.6446	0.5919	0.5439	0.5002	0.4604	0.4241	0.3909	0.3606	0.3329	0.3075	0.2843	0.2630	0.2434	0.2255	0.2090	0.1938	0.1443	0.1342	0.0943
10	0.9053	0.8203	0.7441	0.6755	0.6139	0.5584	0.5083	0.4632	0.4224	0.3855	0.3522	0.3220	0.2945	0.2697	0.2472	0.2267	0.2080	0.1911	0.1756	0.1615	0.1164	0.1074	0.0725
11	0.8963	0.8043	0.7224	0.6496	0.5847	0.5266	0.4751	0.4289	0.3875	0.3505	0.3173	0.2875	0.2607	0.2366	0.2149	0.1954	0.1778	0.1619	0.1476	0.1345	0.0938	0.0859	0.0558
12	0.8874	0.7885	0.7014	0.6246	0.5568	0.4970	0.4440	0.3971	0.3555	0.3186	0.2858	0.2567	0.2307	0.2076	0.1869	0.1685	0.1520	0.1372	0.1240	0.1122	0.0757	0.0687	0.0429
13	0.8787	0.7730	0.6811	0.6006	0.5303	0.4688	0.4150	0.3677	0.3262	0.2897	0.2575	0.2292	0.2042	0.1821	0.1625	0.1452	0.1299	0.1163	0.1042	0.0935	0.0610	0.0550	0.0330
14	0.8700	0.7579	0.6611	0.5775	0.5051	0.4423	0.3878	0.3405	0.2992	0.2633	0.2320	0.2046	0.1807	0.1597	0.1413	0.1252	0.1110	0.0985	0.0876	0.0779	0.0452	0.0400	0.0254
15	0.8613	0.7430	0.6419	0.5553	0.4810	0.4173	0.3624	0.3152	0.2745	0.2394	0.2090	0.1827	0.1599	0.1401	0.1229	0.1079	0.0949	0.0835	0.0736	0.0649	0.0337	0.0352	0.0195
16	0.8528	0.7284	0.6232	0.5339	0.4581	0.3936	0.3387	0.2919	0.2519	0.2176	0.1883	0.1631	0.1415	0.1228	0.1068	0.0930	0.0811	0.0708	0.0618	0.0541	0.0320	0.0281	0.0150
17	0.8444	0.7142	0.6050	0.5134	0.4363	0.3714	0.3166	0.2703	0.2311	0.1978	0.1696	0.1456	0.1252	0.1078	0.0929	0.0802	0.0693	0.0600	0.0520	0.0451	0.0258	0.0225	0.0116
18	0.8360	0.7002	0.5874	0.4936	0.4155	0.3503	0.2959	0.2502	0.2120	0.1799	0.1528	0.1300	0.1108	0.0946	0.0808	0.0691	0.0592	0.0508	0.0437	0.0376	0.0208	0.0180	0.0099
19	0.8277	0.6864	0.5703	0.4746	0.3957	0.3305	0.2765	0.2317	0.1945	0.1635	0.1377	0.1161	0.0981	0.0829	0.0703	0.0596	0.0506	0.0431	0.0367	0.0313	0.0168	0.0144	0.0068
20	0.8195	0.6730	0.5537	0.4564	0.3769	0.3118	0.2584	0.2145	0.1784	0.1486	0.1240	0.1037	0.0868	0.0728	0.0611	0.0514	0.0433	0.0366	0.0308	0.0251	0.0135	0.0115	0.0053
21	0.8114	0.6598	0.5375	0.4388	0.3589	0.2942	0.2415	0.1987	0.1637	0.1351	0.1117	0.0925	0.0768	0.0638	0.0531	0.0443	0.0370	0.0309	0.0259	0.0217	0.0109	0.0092	0.0040
22	0.8034	0.6468	0.5219	0.4220	0.3416	0.2775	0.2257	0.1839	0.1502	0.1228	0.1007	0.0825	0.0680	0.0560	0.0462	0.0382	0.0316	0.0262	0.0218	0.0181	0.0088	0.0074	0.0031
23	0.7954	0.6342	0.5067	0.4057	0.3256	0.2618	0.2109	0.1703	0.1379	0.1117	0.0907	0.0738	0.0601	0.0491	0.0402	0.0329	0.0270	0.0222	0.0183	0.0151	0.0071	0.0059	0.0024
24	0.7876	0.6217	0.4919	0.3901	0.3101	0.2470	0.1971	0.1577	0.1264	0.1015	0.0817	0.0659	0.0532	0.0431	0.0349	0.0284	0.0231	0.0188	0.0154	0.0126	0.0057	0.0047	0.0018
25	0.7798	0.6095	0.4776	0.3751	0.2953	0.2330	0.1842	0.1460	0.1160	0.0923	0.0736	0.0588	0.0471	0.0378	0.0304	0.0245	0.0197	0.0160	0.0129	0.0105	0.0046	0.0038	0.0014
30	0.7419	0.5521	0.4120	0.3083	0.2314	0.1741	0.1314	0.0994	0.0754	0.0573	0.0437	0.0334	0.0256	0.0196	0.0151	0.0116	0.0090	0.0070	0.0054	0.0042	0.0016	0.0012	*
35	0.7059	0.5000	0.3554	0.2534	0.1813	0.1301	0.0937	0.0676	0.0490	0.0356	0.0259	0.0189	0.0139	0.0102	0.0075	0.0055	0.0041	0.0030	0.0023	0.0017	0.0005	*	*
36	0.6989	0.4902	0.3450	0.2437	0.1727	0.1227	0.0875	0.0626	0.0449	0.0323	0.0234	0.0169	0.0123	0.0089	0.0065	0.0048	0.0035	0.0025	0.0019	0.0014	*	*	*
40	0.6717	0.4529	0.3066	0.2083	0.1420	0.0972	0.0668	0.0460	0.0318	0.0221	0.0154	0.0107	0.0075	0.0053	0.0037	0.0026	0.0019	0.0013	0.0010	0.0007	*	*	*
50	0.6080	0.3715	0.2281	0.1407	0.0872	0.0543	0.0339	0.0213	0.0134	0.0085	0.0054	0.0035	0.0022	0.0014	0.0009	0.0006	0.0004	0.0003	0.0002	*	*	*	*

Present Value and Future Value Tables

Table A-4: Present value interest factors for a One-Dollar Annuity Discounted at k percent for n periods: $PVIFA = [1 - (1+k)^{-n}] / k$

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	24%	25%	30%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9345	0.9259	0.9174	0.9091	0.9009	0.8929	0.8850	0.8772	0.8696	0.8621	0.8547	0.8475	0.8403	0.8333	0.8065	0.8000	0.7692
2	1.9704	1.9416	1.9135	1.8861	1.8594	1.8334	1.8080	1.7833	1.7591	1.7355	1.7125	1.6901	1.6681	1.6467	1.6257	1.6052	1.5852	1.5656	1.5465	1.5278	1.4588	1.4400	1.3608
3	2.9410	2.8839	2.8286	2.7751	2.7232	2.6730	2.6243	2.5771	2.5313	2.4869	2.4437	2.4018	2.3612	2.3216	2.2832	2.2459	2.2096	2.1743	2.1399	2.1065	1.9913	1.9520	1.8161
4	3.9020	3.8077	3.7171	3.6299	3.5460	3.4651	3.3872	3.3121	3.2397	3.1699	3.1024	3.0373	2.9745	2.9137	2.8550	2.7982	2.7432	2.6901	2.6386	2.5887	2.4043	2.3615	2.1652
5	4.8534	4.7135	4.5797	4.4518	4.3295	4.2124	4.1002	3.9927	3.8897	3.7908	3.6959	3.6048	3.5172	3.4331	3.3522	3.2743	3.1993	3.1272	3.0576	2.9906	2.7454	2.6993	2.4356
6	5.7955	5.6014	5.4172	5.2421	5.0757	4.9173	4.7665	4.6229	4.4859	4.3553	4.2305	4.1114	3.9975	3.8887	3.7845	3.6847	3.5892	3.4976	3.4098	3.3255	3.0205	2.9514	2.6427
7	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824	5.3893	5.2064	5.0330	4.8684	4.7122	4.5638	4.4226	4.2863	4.1504	4.0286	3.9224	3.8115	3.7057	3.6046	3.2423	3.1611	2.8021
8	7.6517	7.3255	7.0187	6.7327	6.4632	6.2098	5.9713	5.7486	5.5348	5.3348	5.1461	4.9676	4.7988	4.6389	4.4873	4.3436	4.2072	4.0776	3.9544	3.8372	3.4212	3.3289	2.9247
9	8.5660	8.1622	7.7861	7.4359	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590	5.5370	5.3282	5.1317	4.9464	4.7715	4.6055	4.4506	4.3030	4.1633	4.0310	3.5655	3.4631	3.0190
10	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601	7.0235	6.7101	6.4177	6.1446	5.8892	5.6502	5.4262	5.2161	5.0188	4.8332	4.6586	4.4941	4.3389	4.1925	3.6819	3.5705	3.0915
11	10.3676	9.7868	9.2526	8.7605	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	6.2065	5.9377	5.6889	5.4527	5.2337	5.0286	4.8364	4.6560	4.4865	4.3271	3.7757	3.6584	3.1473
12	11.2551	10.5753	9.9540	9.3851	8.8633	8.3838	7.9427	7.5361	7.1607	6.8137	6.4924	6.1944	5.9176	5.6603	5.4205	5.1971	4.9884	4.7932	4.6105	4.4392	3.8514	3.7251	3.1903
13	12.1337	11.3484	10.6350	9.9856	9.3936	8.8527	8.3577	7.9038	7.4869	7.1034	6.7499	6.4235	6.1218	5.8424	5.5831	5.3423	5.1183	4.9095	4.7147	4.5327	3.9124	3.7801	3.2233
14	13.0037	12.1062	11.2961	10.5631	9.8986	9.2950	8.7455	8.2442	7.7862	7.3667	6.9819	6.6282	6.3025	6.0021	5.7245	5.4675	5.2293	5.0081	4.8023	4.6106	3.9516	3.8241	3.2487
15	13.8651	12.8493	11.9379	11.1184	10.3797	9.7122	9.1079	8.5595	8.0607	7.6061	7.1909	6.8109	6.4624	6.1422	5.8474	5.5755	5.3242	5.0919	4.8759	4.6755	4.0019	3.8593	3.2682
16	14.7179	13.5777	12.5611	11.6923	10.8378	10.1059	9.4466	8.8514	8.3126	7.8237	7.3792	6.9740	6.6039	6.2651	5.9542	5.6685	5.4053	5.1624	4.9377	4.7296	4.0333	3.8874	3.2832
17	15.5623	14.2919	13.1861	12.1657	11.2741	10.4773	9.7632	9.1216	8.5436	8.0216	7.5488	7.1196	6.7291	6.3729	6.0472	5.7487	5.4746	5.2223	4.9897	4.7746	4.0591	3.9099	3.2948
18	16.3983	14.9920	13.7595	12.6593	11.6886	10.8276	10.0591	9.3719	8.7556	8.2014	7.7016	7.2497	6.8399	6.4674	6.1280	5.8178	5.5339	5.2732	5.0333	4.8122	4.0799	3.9279	3.3037
19	17.2260	15.6785	14.3238	13.1339	12.0853	11.1581	10.3356	9.6036	8.9501	8.3849	7.8393	7.3659	6.9380	6.5504	6.1982	5.8775	5.5845	5.3162	5.0700	4.8436	4.0867	3.9424	3.3105
20	18.0456	16.3514	14.8775	13.5903	12.4622	11.4699	10.5940	9.8161	9.1285	8.5136	7.9633	7.4694	7.0248	6.6231	6.2593	5.9298	5.6278	5.3527	5.1009	4.8696	4.1103	3.9596	3.3156
21	18.8570	17.0112	15.4150	14.0292	12.8212	11.7641	10.8355	10.0168	9.2922	8.6487	8.0751	7.5620	7.1016	6.6970	6.3125	5.9731	5.6648	5.3837	5.1268	4.8913	4.1212	3.9631	3.3198
22	19.6604	17.6580	15.9369	14.4511	13.1630	12.0416	11.0612	10.2007	9.4424	8.7715	8.1757	7.6446	7.1695	6.7429	6.3587	6.0113	5.6964	5.4099	5.1486	4.9084	4.1300	3.9705	3.3230
23	20.4558	18.2922	16.4436	14.8568	13.4886	12.3034	11.2722	10.3711	9.5602	8.8632	8.2664	7.7184	7.2287	6.7921	6.3988	6.0442	5.7234	5.4321	5.1668	4.9245	4.1371	3.9764	3.3254
24	21.2434	18.9139	16.9355	15.2470	13.7986	12.5504	11.4693	10.5288	9.7066	8.9847	8.3481	7.7843	7.2829	6.8351	6.4338	6.0726	5.7465	5.4509	5.1822	4.9371	4.1428	3.9811	3.3272
25	22.0232	19.5235	17.4131	15.6221	14.0939	12.7834	11.6536	10.6748	9.8726	9.0770	8.4217	7.8431	7.3300	6.8729	6.4641	6.0971	5.7662	5.4669	5.1951	4.9476	4.1474	3.9849	3.3286
30	25.8077	22.3965	19.6004	17.2920	15.3725	13.7648	12.4080	11.2578	10.2737	9.4259	8.6938	8.0552	7.4957	7.0027	6.5860	6.1772	5.8294	5.5168	5.2347	4.9789	4.1601	3.9950	3.3321
35	29.4086	24.9986	21.4872	18.6646	16.3742	14.4982	12.9477	11.6546	10.5668	9.6442	8.8552	8.1755	7.5856	7.0700	6.6166	6.2153	5.8382	5.5366	5.2512	4.9915	4.1644	3.9984	3.3330
40	32.8347	27.3555	23.1148	19.7928	17.1591	15.0463	13.3317	11.9246	10.7674	9.7791	8.9511	8.2438	7.6344	7.1050	6.6418	6.2335	5.8713	5.5482	5.2582	4.9966	4.1659	3.9995	3.3332
50	39.1861	31.4236	25.7298	21.4622	18.2559	15.7819	13.8007	12.2335	10.9617	9.9148	9.0417	8.3045	7.6752	7.1327	6.6605	6.2483	5.8801	5.5541	5.2623	4.9995	4.1666	3.9999	3.3333

