

CIFA PART III SECTION 6

INTERNATIONAL FINANCE

FRIDAY: 1 December 2017.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings.

OUESTION ONE

(a) Examine six causes of balance of payments (BOP) disequilibrium in a country.

(6 marks)

(b) Capricon Limited, a company based in Kenya, exports milk to Ghana but the strong Kenyan shilling (KES) against the Ghanaian Cedi (GHS) hurts sales of the company's milk in Ghana. In the Ghanaian market, Capricorn Limited faces competition from milk producers in Cameroon and Mali whose currencies remain stable relative to the value of Cedi.

Required:

Suggest four measures that you would recommend to Capricon Limited to enable it maintain its market share in Ghana. (4 marks)

(c) (i) Explain the term "currency crisis".

(1 mark)

(ii) Describe five warning signs of a currency cress in a country.

(5 marks)

You have recently been hired as a financial analyst at Urembo Limited, a locally incorporated company that deals in beauty products imported from the United States of America (USA). As the person in charge of negotiating rates of exchange at Urembo Limited, you have realised that the Kenyan shilling has recently been weakening against the United States Dollar (USD), the currency that settles the suppliers payments.

Assume that you have received real time spot quotations from your local bank as follows:

1£ = \$1.9724 1€ = \$1.3450

1£ = €1.4655

Required:

Illustrate how you could benefit from triangular arbitrage when settling a payment worth 5 million USD. (4 marks)

(Total: 20 marks)

QUESTION TWO

(a) Identify four participants in a foreign exchange market, citing one role played by each.

(4 marks)

(b) The following information relates to exchange rates in the United States and Canada:

Spot exchange rate (CAD/USD)
1 – year treasury bill interest rate in the United States
1 – year treasury bill interest rate in Canada
0.95%

Required:

(i) Compute the one-year forward rate.

(2 marks)

(ii) Interpret the results in (b) (i) above.

(1 mark)

(c)	Descr	ibe the following types of fixed exchange rate regimes:	
	(i)	No separate legal tender system.	(1 mark)
	(ii)	Shared currency system.	(1 mark)
	(iii)	Currency board system.	(1 mark)
	(iv)	Target zone system.	(1 mark)
	(v)	Fixed parity system.	(1 mark)
(d)	Distin	guish between "sterilized intervention" and "unsterilized intervention" as used in the foreign	n exchange market. (4 marks)
(e)	to inve	Adams, a United States of America (USA) based investor has 10,000 United States dollars est in Petho Limited's shares, a firm quoted at the Nairobi Securities Exchange (NSE) in per share of Petho Limited's shares is KES 50. The spot exchange rate is 1USD = 105.20 K	Kenya. The market
	Requi (i)	red: The number of Petho Limited's shares that Sarah Adams could purchase.	(2 marks)
	(ii)	The investor's return assuming that in one year, the market price of Petho Limited's sha KES 55 per share and that the exchange rate has changed to 1 USD = 108.55 KES	ares has increased to (2 marks)
		es. Co	(Total: 20 marks)
QUES (a)	TION T		
(a)	and wh	is three Trade Related Investment Measures (TRIMs) that distorted the sprooth flow of in nich are now prohibited by the General Agreement on Trade and Tariffs (GATTs).	(6 marks)
(b)	Zulu I Zulu L	Limited is a South African company that supplies tanned leather to Shoetec Ltd., a limited has invoiced Shoetec Ltd. and is meant to receive 500,000 United States dollars (US	US based company. D) in 180 days.
	The fo	Illowing information, as quoted in the Johannesburg Stock Exchange (JSE) shows the indicterest rates:	ative exchange rates
	90 – da 90 – da	ay South African interest rate ay United States interest rate ay forward exchange rate of USD ate of USD 7.75% ZAR 1.080 ZAR 1.095	
	Note:	ZAR is the South African Rand.	
	Requi Detern	red: nine the amount to be received by Zulu Limited using:	
	(i)	Forward contract hedge.	(2 marks)
	(ii)	Money market hedge.	(4 marks)
(c)	Advise	e Zulu Limited on the most appropriate hedge based on your calculations in (b) (i) and (ii) ab	oove. (1 mark)
(d)	The fo	llowing data obtained from Penbreak Investments Ltd. relates to inflation and interest rate ies, Rwanda and Kenya, over the period between years 2013 and 2017:	s movement for two
	Count Kenya Rwand	6.50 - 4.90 $103.60 - 151.5$	0
	Requii (i)	red: If purchasing power parity (PPP) had held over this period, determine the KES/RW year 2017.	F exchange rate in (3 marks)
	(ii)	Interpret your result in (d) (i) above.	(1 mark)
(e)	Discus	s three services that international banks could provide to their customers.	(3 marks) (Total: 20 marks)
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CF62 Page 2 Out of 4

QUESTION FOUR

- (a) (i) Distinguish between the terms "Greenfield investment" and "Brownfield investment" in relation to foreign direct investments (FDI's). (2 marks)
 - (ii) Citing three reasons, justify why firms prefer acquisition compared to Greenfield investment when conducting international business. (3 marks)
- (b) Flamingo Limited is an agro-based company incorporated in Kenya. The company intends to invest in a capital project which will be based in Cape Town, South Africa.

Additional information:

- 1. The project will commence on 1 January 2018 with the initial capital of 5 million South African Rands (ZAR) which will be used in acquiring agricultural machinery with an estimated useful life of 5 years. The straight line method of depreciation will be applied.
- 2. To enable the firm pay land rates and other working capital requirements, an additional 2.5 million ZAR will be required and it is expected that this amount will be recouped in full at the end of the project's useful life.
- 3. Annual sales revenue from the project are estimated as follows:

Year	Revenue (ZAR)	Fixed costs (ZAR)
2018	2,600,000	600,000
2019	3,500,000	780,000
2020	5,000,000	905,000
2021	4,200,000	880,000
2022	2,800,000	450,000

- 4. Variable operating costs are expected to be a 1/5 of the sales and are assumed to accrue evenly.
- 5. The exchange rates between the Kenya Shilling and the South Africa Rand are as follows:

	ZAR/KES
1 January 2018	8.00
31 December 2018	8.50
31 December 2019	9.00
31 December 2020	9.50
31 December 2021	10.00
31 December 2022	10.30

- 6. All the cash flows are expected to occur at the year end.
- 7. The cost of capital for both South Africa and Kenya is assumed to be 12% per annum.
- 8. Assume that the corporation tax rate in South Africa is 30% and no further taxation will be levied in Kenya.

Required:

(i) The net present value (NPV) of the project in KES.

(8 marks)

(ii) Based on your results in (b) (i) above, advise Flamingo Limited.

(I mark)

- (iii) Recommend the type of hedge that Flamingo Limited, being an agro-based company, could employ to cushion itself against the negative effects of weather. (1 mark)
- (c) As an experienced investment and financial analyst, you have been consulted by Wesco International Investment Group (WIIG), a company based in the United States which is considering setting up a subsidiary in your country. The management of WIIG is concerned that your country is expecting to hold a general election at the end of this year.

Required:

(i) Advise WIIG on three political risks that the subsidiary might face in your country.

(3 marks)

(ii) Suggest relevant mitigating factors that WHG could adopt to address the risks identified in (c) (i) above.

(2 marks)

(Total: 20 marks)

OUESTION FIVE

- (a) In relation to the international tax environment:
 - (i) Describe three criteria for determining tax neutrality.

(3 marks)

- (ii) Examine three methods that the tax authority of your country might use to determine if transfer price is reasonable. (3 marks)
- (b) (i) Assess three merits that would accrue to a multinational corporation (MNC) that has a centralised cash manager who handles all investment and borrowing for all affiliates of the MNC, versus each affiliate having a local manager who performs the cash management activities of the affiliate only. (3 marks)
 - (ii) The following information relates to interaffiliate cash flows:

Affiliate	Expected transactions (USD"000")	Standard deviation (USD"000")
Kenya	100	40
Uganda	150	60
Pakistan	175	30
China	200	70

Assume that the interaffiliate cash flows are uncorrelated with one another.

Required:

The standard deviation of the portfolio of cash held by the centralised depository.

(2 marks)

(c) The Basel II accord sets out rules on core disclosure areas that should be met by banks and which must be enforced by bank supervisors.

In relation to the above statement, explain three disclosures mentioned with Basel II accord of bank regulation.

(3 marks)

(d) Today's global market presents a variety of ethical dilemmas for multinational corporations. This ethical decision-making process becomes particularly challenging when the ethical standards in the company's home country are higher than those in the subsidiary's markets.

Required:

In relation to the above statement, examine six whethical business practices that multinational corporation managers could engage in while conducting international business. (6 marks)

(Total: 20 marks)

Present Value of 1 Received at the End of *n* Periods: $PV1F_{r,n} = 1/(1+r)^n = (1+r)^{-n}$

$$PVIF_{r,n} = 1/(1+r)^n = (1+r)^{-n}$$

			1 "																	
Period	1%	2%	3%	4%	5%	6%_	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%	36%
1	.9901	.9804	.9709	.9615	.9524	.9434	.9346	9259	.9174	.9091	.8929	8772	.8696	.8621	.8475	.8333	.8065	.7813	7576	7353
2	.9803	.9612	.9426	.9246	.9070	.8900	8734	.8573	.8417	.8264	.7972	7695	7561	.7432	.7182	.6944	.6504	.6104	5739	.5407
3	.9706	.9423	.9151	.8890	.8638	.8396	.8163	.7938	.7722	.7513	.7118	6750	6575	.6407	.6086	.5787	.5245	.4768	4348	3975
4	.9610	,9238	.8885	.8548	.8227	.7921	.7629	.7350	.7084	.6830	.6355	5921	5718	.5523	.5158	.4823	.4230	.3725	.3294	2923
5	.9515	.9057	.8626	.8219	.7835	.7473	.7130	.6806	.6499	.6209	.5674	5194	.4972	.4761	.4371	.4019	.3411	2910	2495	.2149
6	.9420	.8880	.8375	.7903	.7462	.7050	.6663	.6302	.5963	.5645	.5066	.4556	.4323	.4104	.3704	.3349	.2751	.2274	1890	.1580
7	.9327	.8706	.8131	.7599	.7107	.6651	.6227	.5835	.5470	.5132	.4523	.3996	.3759	.3538	.3139	.2791	.2218	:1776	.1432	.1162
8	.9235	.8535	.7894	.7307	.6768	.6274	.5820	.5403	.5019	.4665	4039	.3506	.3269	.3050	.2660	.2326	.1789	.1388	.1085	.0854
9	.9143	.8368	.7664	.7026	.6446	.5919	.5439	.5002	.4604	.4241	.3606	3075	.2843	.2630	.2255	.1938	.1443	.1084	.0822	.0628
10	.9053	.8203	.7441	.6756	.6139	.5584	.5083	.4632	.4224	.3855	.3220	.2697	.2472	.2267	.1911	.1615	.1164	.0847	.0623	0462
. 11	.8963	8043	.7224	.6496	.5847	.5268	.4751	.4289	.3875	.3505	.2875	.2366	.2149	1954	.1619	.1346	.0938	.0662	.0472	.0340
12	.8874	.7885	.7014	.6246	.5568	.4970	.4440	.3971	.3555	3186	.2567	.2076	.1869	1685	.1372	.1122	.0757	.0517	.0357	.0250
13	.8787	.7730	.6810	.6006	.5303	.4688	4150	.3677	.3262	.2897	.2292	.1821	.1625	.1452	.1163	.0985	.0610	.0404	.0271	.0184
14	.8700	.7579	.6611	.5775	.5051	.4423	.3878	.3405	.2992	.2633	.2046	.1597	.1413	.1252	.0985	.0779	0492	.0316	0205	.0135
15	.8613	.7430	.6419	.5553	.4810	.4173	.3624	3152	.2745	.2394	.1827	1401	.1229	.1079	.0835	0649	.0397	.0247	.0155	0099
16	8528	.7284	.6232	.5339	.4581	.3936	.3387	.2919	.2519	.2176	.1631	.1229	1069	.0930	0208	.0541	,0320	.0193	.0118	.0073
17	.8444	.7142	.6050	.5134	.4363	.3714	.3166	.2703	.2311	.1978	.1456	1078	.0929	.0802	.0600	.0451	.0258	.0150	.0089	0054
18	.8360	.7002	.5874	.4936	.4155	.3503	.2959	2502	.2120	.1799	.1300	.0946	.0808	.069	.0508	.0376	.0208	.0118	.0068	.0039
19	.8277	.6864	.5703	.4746	.3957	.3305	.2765	2317	.1945	.1635	.1161	.0829	.0703	0596	.0431	.0313	.0168	.0092	.0051	.0029
20	.8195	.6730	.5537	.4564	.3769	.3118	.2584	.2145	1784	1486	1037	.0728	.06110	:0514	.0365	.0261	.0135	.0072	.0039	.0021
25	7798	.6095	.4776	.3751	.2953	.2330	.1842	1460	.1160	.0923	.0588	0378	b 304	.0245	0160	.0105	.0046	.0021	.0010	0005
30	7419	.5521	.4120	.3083	.2314	.1741	.1314	.0994	0754	.0573	.0334	0196	0151	.0116	.0070	.0042	.0016	.0006	.0002	.0001
40	.6717	4529	3066	.2083	.1420	.0972	.0668	0460	.0318	.0221	.0107	0053	0037	.0026	.0013	.0007	.0002	.0001		
50	.6080	.3715	.2281	.1407	.0872	.0543	.0339	.0213	.0134	.0085	.0035	0014	.0009	.0006	.0003	.0001				
60	.5504	.3048	.1697	.0951	.0535	.0303	.0173	.0099	.0057	.0033	.001	.0004	.0002	.0001						

Present Value of an Annuity of Per Period for n Periods:

$$PVIF_{rt} = \sum_{r=1}^{n} \frac{1}{(1+r)^r} = \frac{1-\frac{1}{(1+r)^n}}{r}$$

1 0.9901 0.9804 0.9709 0.9615 0.964 0.9434 0.9346 0.9259 0.9174 0.9091 0.8929 0.8772 0.8696 0.8621 0.8475 0.8333 0.8065 0.77 2 1.9704 1.9416 1.9315 1.8861 (8594 1.8334 1.8080 1.7833 1.7591 1.7355 1.6901 1.6467 1.6257 1.6052 1.5656 1.5278 1.4568 1.33 3 2.9410 2.8839 2.2966 2.7751 2.7232 2.6730 2.6243 2.5771 2.5313 2.4669 2.4016 2.2216 2.2812 2.2439 2.1743 2.1065 1.9813 1.8081 3 3.9020 3.8077 3.7171 3.6299 3.5460 3.4651 3.3872 3.3121 3.2397 3.1699 3.0373 2.9137 2.6550 2.7962 2.6901 2.5887 2.4043 2.2 5 4.8534 4.7135 4.5797 4.4518 4.3295 4.2124 4.1002 3.9927 3.8897 3.7908 3.6048 3.4331 3.522 3.743 3.1272 2.9006 2.7454 2.5 6 5.7955 5.6014 5.4172 5.2421 5.0757 4.9173 4.7665 4.6229 4.4859 4.3553 4.1114 3.8887 3.7845 3.6847 3.4976 3.3255 3.0205 2.78 7 6.7282 6.4720 6.2303 6.0021 5.7864 5.5824 5.3893 5.2064 5.0330 4.8644 4.5638 4.2883 4.1604 4.0386 3.815 3.6046 3.2423 2.93 9 8.5660 8.1622 7.7861 7.4353 7.1078 6.8017 6.5152 6.2469 5.9952 5.7590 5.2822 4.9464 4.7716 4.6065 4.3030 4.0310 3.5655 3.11 10 9.4713 8.9826 8.5302 8.1109 7.7217 7.3601 7.0236 6.7101 6.4177 6.1446 5.6502 5.2161 5.0188 4.8337 4.4941 4.1925 3.6819 3.24 11 10.3676 9.7868 9.2526 8.7605 8.3064 7.8869 7.4987 7.1390 6.8052 6.4519 5.9377 5.4557 5.2337 5.0286 4.5606 4.3271 3.7517 3.33 13 12.1337 11.3484 10.6350 9.9856 9.3936 8.8537 8.3577 7.9038 7.4869 7.1034 6.4235 5.8424 5.5831 5.3423 4.905 4.3513 1.2161 1.3561 1.2561 1.05631 9.8986 9.2950 8.7455 8.2442 7.7862 7.8667 6.6282 6.0021 5.7245 5.0084 4.6506 4.3271 3.5161 3.5616 1.2657 11.2741 10.4773 9.7632 9.1216 8.5436 8.0216 7.196 6.8107 6.4675 5.0084 4.5606 4.3273 4.4941 4.1925 3.6819 3.35 18 14.7179 13.5777 12.5611 11.6523 10.8378 10.1059 9.4466 8.8514 8.3126 7.8237 6.9740 6.2651 5.9542 5.6685 5.1524 4.7296 4.0333 3.56 18 14.7179 13.5777 12.5611 11.6523 10.8378 10.1059 9.4466 8.8514 8.3126 7.8237 6.9740 6.6251 5.9542 5.6685 5.1524 4.7296 4.0333 3.56 18 14.7179 13.5777 12.5611 11.6523 10.8378 10.1059 9.4466 8.8514 8.3126 7.8237 6.9740 6.6251 5.9542 5.6685 5.1524 4.7296 4.0333 3.56 18 14.7179 13.5777 12.5611																				
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2 1,9704 1,9416 1,9135 1,8861 2,594 1,8334 1,8080 1,7833 1,7591 1,7355 1,6901 1,6467 1,6257 1,6032 1,5656 1,5278 1,4568 1,33 2,9410 2,8839 2,8268 2,7751 2,7232 2,6730 2,6243 2,5771 2,5113 2,4869 2,4018 2,3216 2,2832 2,2459 2,1743 2,1065 1,9813 1,88 4 3,920 3,8077 3,7171 3,6299 3,6469 3,4651 3,3212 3,2397 3,1699 3,0373 2,9137 2,8550 2,7982 2,6901 2,5887 2,4043 2,2 4,8534 4,7135 4,5797 4,4518 4,3295 4,2124 4,1002 3,9927 3,8897 3,7908 3,6048 3,4331 3,3522 3,2743 3,1272 2,9906 2,7454 2,55 4,8534 4,7135 4,5797 4,4518 4,3295 4,2124 4,1002 3,9927 3,8897 3,7908 3,6048 3,4331 3,3522 3,2743 3,1272 2,9906 2,7454 2,55 4,8534 4,7135 4,5797 4,4518 4,3295 4,2124 4,1002 3,9927 3,8897 3,7908 3,6048 3,4331 3,3522 3,2743 3,1272 2,9906 2,7454 2,55 4,8534 4,7135 4,6712 4,9712	1	0.9901	0.9804	0.9709	0.9615	0.9522	0.9434	0.9346	0.9259	0 9174	0.9091	0.8929	0.8772	0.8696	0.0021	0.9475	0.0222	0.0005	0.7813	
2.9410 2.8839 2.8286 2.7751 2.7232 2.6730 2.6243 2.5771 2.5313 2.4869 2.4018 2.3216 2.2832 2.2459 2.1743 2.1065 1.9813 1.88	2	1.9704	1.9416	1.9135	1,8861	_(.8594	1.8334						-							0.7576
4 3.9020 3.8077 3.7171 3.6299 3.5460 3.4651 3.8872 3.3121 3.2397 3.1659 3.0373 2.9137 2.8550 2.7982 2.6901 2.5887 2.4043 2.255 4.8534 4.7135 4.5797 4.4518 4.3295 4.2124 4.1002 3.9927 3.8897 3.7908 3.6048 3.4331 3.3522 3.2743 3.1272 2.9906 2.7454 2.556 6 5.7955 5.6014 5.4172 5.2421 5.0757 4.9173 4.7665 4.6229 4.4859 4.3553 4.1114 3.8887 3.7845 3.6847 3.4976 3.3255 3.0205 2.775 6.7282 6.4720 6.2030 6.0021 5.7864 5.5824 5.3893 5.2064 5.0330 4.8684 4.5538 4.2883 4.1604 4.0386 3.8115 3.6046 3.2423 2.95 8 7.6517 7.3255 7.0197 6.7327 6.46332 6.2098 5.9713 5.7466 5.5348 4.8334 4.9676 4.6399 4.4873 4.4366 4.0776 3.8372 3.4212 3.07 9 8.5660 8.1622 7.7861 7.4353 7.1078 6.8017 6.5152 6.2469 5.9952 5.7590 5.3282 4.9464 4.7716 4.6065 4.3030 4.0310 3.5655 3.11 10 9.4713 8.9826 8.5022 8.1109 7.7217 7.3601 7.0236 6.7101 6.4177 6.1446 5.6502 5.2161 5.0183 4.8332 4.4941 4.1925 3.6819 3.24 11 10.3676 9.7868 9.2526 8.7605 8.3064 7.8869 7.4987 7.1390 6.8052 6.4951 5.9377 5.4527 5.2337 5.0286 4.6560 4.3271 3.7757 3.32 12 11.2551 10.5753 9.9540 9.3851 8.8633 8.3838 7.9427 7.5361 7.1607 6.8137 6.1944 5.6603 5.4206 5.1971 4.7932 4.4392 3.8514 1 13.0037 12.1062 11.2961 10.5631 9.8986 9.2950 8.7455 8.2442 7.7862 7.3667 6.6282 6.0021 5.7245 5.4675 5.0081 4.6106 3.9616 3.44 13.0037 12.1062 11.2961 10.5631 9.8986 9.2950 8.7455 8.2442 7.7862 7.3667 6.6282 6.0021 5.7245 5.4675 5.0081 4.6106 3.9616 3.44 14.7179 13.5777 12.5611 11.6523 10.8378 10.009 9.4466 8.8514 8.3126 7.8237 6.9740 6.2651 5.9542 5.6885 5.1624 4.7296 4.0331 3.50 15 15.63981 14.9920 13.7535 12.6593 11.6896 10.9576 10.0591 9.3719 8.7556 8.2014 7.2497 6.4674 6.1280 5.8178 5.2223 4.7746 4.0591 3.55 15 15.63981 14.9920 13.7535 12.6593 11.6896 10.8276 10.0591 9.3719 8.7556 8.2014 7.2497 6.4674 6.1280 5.8178 5.2223 4.7746 4.0591 3.55 15 15.63981 14.9920 13.7535 12.6593 11.6896 10.8276 10.0591 9.3719 8.7556 8.2014 7.2497 6.4674 6.1280 5.8178 5.2223 4.7746 4.0591 3.55 15 17.2260 15.6785 14.3238 13.1339 12.0853 11.1581 10.3356 9.6036 8.9501 8.8547 7	3	2.9410	2.8839	2.8286	2.7751	\sim														1.3315
5 4.8534 4.7135 4.5797 4.4518 4.3295 4.2124 4.1002 3.9927 3.8897 3.7908 3.6048 3.4331 3.3522 3.2743 3.1272 2.5906 2.7454 2.55 6 5.7955 5.6014 5.4172 5.2421 5.0757 4.9173 4.7665 4.6229 4.4859 4.3553 4.1114 3.8887 3.7845 3.6847 3.4976 3.3255 3.0205 2.77 7 6.7282 6.4720 6.2303 6.0021 5.7864 5.5824 5.3893 5.2064 5.0330 4.8684 4.5638 4.2883 4.1604 4.0386 3.8115 3.6046 3.2423 2.95 8 7.6517 7.3255 7.0197 6.7327 6.4632 6.2098 5.9713 5.7466 5.5348 5.3349 4.9676 4.6389 4.4873 4.3436 4.0776 3.8372 3.4212 3.07 9 8.5660 8.1622 7.7861 7.4353 7.1078 6.8017 6.5152 6.2469 5.9952 5.7590 5.3282 4.9464 4.7716 4.6065 4.0300 4.0310 3.5655 3.11 10 9.4713 8.9826 8.5302 8.1109 7.7217 7.3601 7.0236 6.7101 6.4177 6.1446 5.6502 5.2161 5.0183 4.8332 4.4941 4.1925 3.6819 3.24 11 10.3676 9.7868 9.2526 8.7605 8.3064 7.8869 7.4987 7.1390 6.8052 6.4951 5.9377 5.4527 5.2337 5.0286 4.6560 4.3203 4.3911 3.21337 11.3484 10.6350 9.9856 9.3936 8.8527 8.3577 7.9038 7.4869 7.1034 6.4235 5.8424 5.5831 5.3423 4.9095 4.5327 3.9124 3.44 13.0307 12.1062 11.2961 10.5631 9.8986 9.2950 8.7455 8.2442 7.7862 7.3667 6.6282 6.0021 5.7245 5.4675 5.0081 4.6106 3.9616 3.44 13.0307 12.1062 11.2961 10.5631 9.8986 9.2950 8.7455 8.2442 7.7862 7.3667 6.6282 6.0021 5.7245 5.4675 5.0081 4.6106 3.9616 3.44 13.0307 12.1062 11.2961 10.5631 9.8986 9.2950 8.7455 8.2442 7.7862 7.3667 6.6282 6.0021 5.7245 5.4675 5.0081 4.6106 3.9616 3.44 15.5523 14.2919 13.1661 12.1657 11.2741 10.4773 9.7632 9.1216 8.5456 8.0216 7.1196 6.3729 6.0472 5.7487 5.2232 4.7796 4.0333 3.50 16 14.7179 13.5777 12.5611 11.6523 10.8378 10.1059 9.4466 8.8514 8.3126 7.8237 6.9470 6.6251 5.9542 5.6685 5.1624 4.7296 4.0333 3.50 17 15.5623 14.2919 13.1661 12.1657 11.2741 10.4773 9.7632 9.1216 8.5456 8.0216 7.1196 6.3729 6.0472 5.7487 5.2232 4.7766 4.0333 3.50 18 16.3983 14.9920 13.7535 12.6593 11.6896 10.8276 10.0591 9.3719 8.7556 8.2014 7.2497 6.4674 6.1280 5.8178 5.2732 4.8122 4.0799 3.55 18 16.3983 14.9920 13.7535 12.6593 11.6896 10.8276 10.0591 9.3719 8.7556 8.2014 7.2497 6.4674 6.1280 5.8178 5.2732 4.8122 4.0	4	3.9020	3.8077	3.7171	3.6299	3.5460	3.4651													1.7663
7 6.7282 6.4720 6.2303 6.0021 5.7864 5.5824 5.3893 5.2064 5.0330 4.6864 4.5638 4.2863 4.1604 4.0366 3.8115 3.6046 3.2423 2.2 8 7.6517 7.3255 7.0197 6.7327 6.4532 6.2098 5.9713 5.7466 5.5346 5.3349 4.9676 4.6389 4.4873 4.3436 4.0776 3.8372 3.4212 3.0 9 8.5660 8.1622 7.7861 7.4353 7.1078 6.8017 6.5152 6.2469 5.9952 5.7590 5.3262 4.9464 4.7716 4.6065 4.3030 4.0310 3.5655 3.18 10 9.4713 8.9826 8.5302 8.1109 7.7217 7.3601 7.0236 6.7101 6.4177 6.1446 5.6502 5.2161 5.0188 4.8332 4.4941 4.1925 3.6819 3.26 11 10.3676 9.7868 9.2526 8.7605 8.3664 7.8969 7.4987 7.1390 6.8052 6.4951 5.9377 5.4527 5.2337 5.0286 4.6560 4.3271 3.7757 3.33 12 11.2551 10.5753 9.9540 9.3851 8.8633 8.3838 7.9427 7.5361 7.1607 6.8137 6.1944 5.6603 5.4206 5.1971 4.7932 4.4392 3.8514 3.34 13 12.1337 11.3484 10.6350 9.9856 9.3936 8.8527 8.3577 7.9038 7.4869 7.1034 6.4235 5.8424 5.5831 5.3423 4.9095 4.5327 3.9124 3.42 14 13.0037 12.1062 11.2961 10.5631 9.8986 9.2950 8.7455 8.2442 7.7862 7.3667 6.6282 6.0021 5.7245 5.6675 5.0081 4.6106 3.9616 3.44 15 13.8651 12.8493 11.9379 11.1184 10.3797 9.7122 9.1079 8.5595 8.0607 7.6061 6.8109 6.1422 5.8474 5.5755 5.0916 4.6755 4.0013 3.46 16 14.7179 13.5777 12.5611 11.6523 10.8378 10.0599 9.4466 8.8514 8.3126 7.8237 6.9740 6.2551 5.9542 5.6685 5.1624 4.7296 4.0333 3.506 16 14.7179 13.5777 12.5611 11.6523 10.8378 10.0599 9.4466 8.8514 8.3126 7.8237 6.9740 6.2551 5.9542 5.6685 5.1624 4.7296 4.0333 3.506 17 15.5623 14.2919 13.1661 12.1657 11.2741 10.4773 9.7632 9.116 8.5436 8.0216 7.1196 6.3729 6.0472 5.7487 5.2223 4.7746 4.0991 3.51 18 16.3983 14.9920 13.7535 12.6593 11.6896 10.8276 10.0591 9.3719 8.7556 8.2014 7.2497 6.4674 6.1280 5.8178 5.2324 4.8434 4.0967 3.55 18 16.3983 14.9920 13.7535 12.6593 11.6896 10.8276 10.0591 9.3719 8.7556 8.2014 7.2497 6.4674 6.1280 5.8178 5.3162 4.8433 4.0967 3.55 18 16.3983 14.9920 13.7535 12.6593 11.6896 10.8578 10.05940 9.8181 9.1285 8.5136 7.4694 6.6231 6.2593 5.9288 5.3527 4.8696 4.1103 3.56	5	4.8534	4.7135	4.5797	4.4518	4.3295	4.2124	4.1002											2.2410 2.5320	2.0957 2.3452
7 6.7282 6.4720 6.2303 6.0021 5.7864 5.5824 5.3893 5.2064 5.0330 4.8684 4.5638 4.2883 4.1604 4.0386 3.8115 3.6046 3.2423 2.95 8 7.6517 7.3255 7.0197 6.7327 6.4532 6.2098 5.9713 5.7466 5.5348 5.3349 4.9676 4.6389 4.4873 4.3436 4.0776 3.8372 3.4212 3.03 9 8.5660 8.1622 7.7861 7.4353 7.1078 6.8017 6.5152 6.2469 5.9952 5.7590 5.3282 4.9464 4.7716 4.6065 4.3030 4.0310 3.5655 3.18 10 9.4713 8.9826 8.5302 8.1109 7.7217 7.3601 7.0236 6.7101 6.4177 6.1446 5.6502 5.2161 5.0188 4.8332 4.4941 4.1925 3.6819 3.24 11 10.3676 9.7868 9.2526 8.7605 8.3064 7.8869 7.4987 7.1390 6.8052 6.4951 5.9377 5.4527 5.2337 5.0286 4.6560 4.3271 3.7757 3.33 12 11.2551 10.5753 9.9540 9.3851 8.8633 8.3838 7.9427 7.5361 7.1607 6.8137 6.1944 5.6603 5.4206 5.1971 4.7932 4.4392 3.8514 3.31 13 12.1337 11.3484 10.6350 9.9856 9.3936 8.8527 8.3577 7.9308 7.4869 7.1034 6.4235 5.8424 5.5831 5.3423 4.9095 4.5327 3.9124 3.41 14 13.0037 12.1062 11.2961 10.5631 9.8986 9.2950 8.7455 8.2442 7.7862 7.3667 6.6282 6.0021 5.7245 5.4675 5.0081 4.6106 3.9616 3.44 15 13.8651 12.8493 11.9379 11.1184 10.3797 9.7122 9.1079 8.5595 8.0607 7.6061 6.8109 6.1422 5.8474 5.5755 5.0081 4.6106 3.9616 3.44 16 14.7179 13.5777 12.5611 11.6523 10.8378 10.1059 9.4466 8.8514 8.3126 7.8237 6.9740 6.2651 5.9542 5.6685 5.1624 4.7296 4.0333 3.54 16 14.7179 13.5777 12.5611 11.6523 10.8378 10.1059 9.4466 8.8514 8.3126 7.8237 6.9740 6.2651 5.9542 5.6685 5.1624 4.7296 4.0333 3.54 17 15.5623 14.2919 13.1661 12.1657 11.2741 10.4773 9.7632 9.1216 8.5436 8.0216 7.1196 6.3729 6.0472 5.7487 5.2233 4.7746 4.0591 3.51 18 16.3983 14.9920 13.7535 12.6593 11.6896 10.8276 10.0591 9.3719 8.7556 8.2014 7.2497 6.4674 6.1980 5.8775 5.3162 4.8435 4.0967 3.53 18 16.3983 14.9920 13.7535 12.6593 11.6896 10.8276 10.0591 9.3719 8.7556 8.2014 7.2497 6.4674 6.1980 5.8775 5.3162 4.8435 4.0967 3.53 18 16.3983 14.9925 13.7539 12.0853 11.1689 10.3356 9.6036 8.9501 8.3649 7.3658 6.5504 6.1982 5.8775 5.3162 4.8435 4.0966 4.1033 3.554 18 16.3983 14.9925 13.7539 12.6625 11.4699 10.5340 9.8181 9.1285 8.5136 7.4694 6.6231 6.25	6	5,7955	5.6014	5.4172	5.2421	5.0757	4.9173	4.7665	4.6229	4.4859	4.3553	4.1114	3.8887	3 7845	3 6847	3 4976	3 3255	3 0205	2.7594	2 5342
8 7.6517 7.3255 7.0197 6.7327 6.4632 6.2098 5.9713 5.7466 5.5348 5.3349 4.9676 4.6389 4.4873 4.3436 4.0776 3.8372 3.4212 3.02 9 8.5660 8.1622 7.7861 7.4353 7.1078 6.8017 6.5152 6.2469 5.9952 5.7590 5.3282 4.9464 4.7716 4.6065 4.3030 4.0310 3.5655 3.18 9 9.4713 8.9826 8.5302 8.1109 7.7217 7.3601 7.0236 6.7101 6.4177 6.1446 5.6502 5.2161 5.0183 4.8332 4.4941 4.1925 3.6819 3.24 11 10.3676 9.7868 9.2526 8.7605 8.3064 7.8869 7.4997 7.1390 6.8052 6.4951 5.9377 5.4527 5.2337 5.0286 4.6560 4.3271 3.7757 3.33 12 11.2551 10.5753 9.9540 9.3851 8.8633 8.3883 7.9427 7.5361 7.1607 6.8137 6.1944 5.6603 5.4206 5.1971 4.7932 4.4392 3.8514 13 12.1337 11.3484 10.6350 9.9856 9.3936 8.8527 8.3577 7.9038 7.4869 7.1034 6.4235 5.8424 5.5831 5.3423 4.9095 4.5327 3.9124 14 13.0037 12.1062 11.2961 10.5631 9.8986 9.2950 8.7455 8.2442 7.7862 7.3667 6.6282 6.0021 5.7245 5.4675 5.0081 4.6106 3.9616 3.44 15 13.8651 12.8493 11.9379 11.1184 10.3797 9.7122 9.1079 8.5595 8.0607 7.6061 6.8109 6.1422 5.8474 5.5755 5.0916 4.6755 4.0013 3.46 16 14.7179 13.5777 12.5611 11.6523 10.8378 10.1059 9.4466 8.8514 8.3126 7.8237 6.9740 6.2651 5.9542 5.6685 5.1624 4.7296 4.0333 3.50 17 15.5623 14.2919 13.1661 12.1657 11.2741 10.4773 9.7632 9.1216 8.5436 8.0216 7.1196 6.3729 6.0472 5.7487 5.2233 4.7746 4.0591 3.51 18 16.3983 14.9920 13.7535 12.6593 11.6896 10.8276 10.0591 9.3719 8.7556 8.2014 7.2497 6.4674 6.1280 5.8178 5.2233 4.7746 4.0591 3.51 18 16.3983 14.9920 13.7535 12.6593 11.6896 10.8276 10.0591 9.3719 8.7556 8.2014 7.2497 6.4674 6.1280 5.8178 5.3162 4.8435 4.0997 3.55 18.0456 16.3514 14.8775 13.5903 12.4622 11.4699 10.5940 9.8181 9.1285 8.5136 7.4694 6.6231 6.2593 5.9288 5.3527 4.8696 4.1103 3.54 18 16.3983 14.2929 13.7535 23.1148 19.7928 17.1591 15.0463 13.3317 11.9246 10.7574 9.7791 8.2438 7.1050 6.6641 6.0971 5.4669 4.9476 4.1610 3.56 18 16 14 14 14 15 15 14 14 15 15 15 15 15 15 15 15 15 15 15 15 15	7	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824	5,3893	5.2064	5,0330	4.8684								2.9370	2.6775
9 8.5660 8.1622 7.7861 7.4353 7.1078 6.8017 6.5152 6.2469 5.9952 5.7590 5.3282 4.9464 4.7716 4.6065 4.3030 4.0310 3.5655 3.16 9.4713 8.9826 8.5302 8.1109 7.7217 7.3601 7.0236 6.7101 6.4177 6.1446 5.6502 5.2161 5.0188 4.8332 4.4941 4.1925 3.6819 3.26 11 10.3676 9.7868 9.2526 8.7605 8.3064 7.8869 7.4987 7.1390 6.8052 6.4951 5.9377 5.4527 5.2337 5.0286 4.6560 4.3271 3.7757 3.33 11 1.2551 10.5753 9.9540 9.3851 8.8633 8.3838 7.9427 7.5361 7.1607 6.8137 6.1944 5.6603 5.4206 5.1971 4.7932 4.4392 3.8514 3.31 12.1337 11.3484 10.6350 9.9856 9.3936 8.8527 8.3577 7.9038 7.4869 7.1034 6.4235 5.8424 5.5831 5.3423 4.9095 4.5327 3.9124 13.0037 12.1062 11.2961 10.5631 9.8986 9.2950 8.7455 8.2442 7.7862 7.3667 6.6282 6.0021 5.7245 5.4675 5.0081 4.6106 3.9616 3.44 13.0037 12.1062 11.2961 10.5631 9.8986 9.2950 8.7455 8.2442 7.7862 7.3667 6.6282 6.0021 5.7245 5.4675 5.0081 4.6106 3.9616 3.44 13.0037 12.1062 11.2961 10.5631 9.8986 9.2950 8.7455 8.2442 7.7862 7.3667 6.6282 6.0021 5.7245 5.4675 5.0081 4.6106 3.9616 3.44 13.0037 12.1062 11.2961 10.5631 9.8986 9.2950 8.7455 8.2442 7.7862 7.3667 6.6282 6.0021 5.7245 5.4675 5.0081 4.6106 3.9616 3.44 13.0037 12.1062 11.2961 10.5631 9.8986 9.2950 8.7455 8.2442 7.7862 7.3667 6.6282 6.0021 5.7245 5.4675 5.0081 4.6106 3.9616 3.44 14.7179 13.5777 12.5611 11.6523 10.8378 10.1059 9.4466 8.8514 8.3126 7.8237 6.9740 6.2651 5.9542 5.6685 5.1624 4.7296 4.0331 3.50 11 11 11 11 11 11 11 11 11 11 11 11 11	8	7.6517	7.3255	7.0197	6.7327	6.4632	6.2098	5.9713	5.7466	5.5348	5.3349									2.7860
9.4713 8.9826 8.5302 8.1109 7.7217 7.3601 7.0236 6.7101 6.4177 6.1446 5.6502 5.2161 5.0183 4.8332 4.4941 4.1925 3.6819 3.261 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	9	8.5660	8.1622	7.7861	7,4353	7.1078	6.8017	6.5152	6.2469	5.9952									3.1842	
12 11.2551 10.5753 9.9540 9.3851 8.8633 8.3838 7.9427 7.5361 7.1607 6.8137 6.1944 5.6603 5.4206 5.1971 4.7932 4.4392 3.8514 3.371 13.484 10.6350 9.9856 9.3936 8.8527 8.3577 7.9038 7.4869 7.1034 6.4235 5.8424 5.5831 5.3423 4.9095 4.5327 3.9124 3.44 13.0037 12.1062 11.2961 10.5631 9.8986 9.2950 8.7455 8.2442 7.7862 7.3667 6.6282 6.0021 5.7245 5.4675 5.0081 4.6106 3.9616 3.451 13.8651 12.8493 11.9379 11.1184 10.3797 9.7122 9.1079 8.5595 8.0607 7.6061 6.8109 6.1422 5.8474 5.5755 5.0916 4.6755 4.0013 3.461 12.1062 11.2961 13.1061 12.1657 11.2741 10.4773 9.7632 9.1216 8.5436 8.0216 7.1196 6.3729 6.0472 5.7487 5.2223 4.7746 4.0591 3.51 18 16.3983 14.9920 13.7535 12.6593 11.6896 10.8276 10.0591 9.3719 8.7556 8.2014 7.2497 6.4674 6.1280 5.8178 5.2732 4.8122 4.0799 3.52 11.2016 15.6785 14.3238 13.1339 12.0853 11.1581 10.3356 9.6036 8.9501 8.3649 7.3658 6.5504 6.1982 5.8775 5.3162 4.8435 4.0967 3.53 18.0456 16.3514 14.8775 13.5903 12.4622 11.4699 10.5940 9.8181 9.1285 8.5136 7.4694 6.6231 6.2593 5.9288 5.3527 4.8696 4.1103 3.54 18.0456 16.3514 14.8775 13.5903 12.7834 11.6536 10.6748 9.8226 9.0770 7.8431 6.8729 6.4641 6.0971 5.4669 4.9476 4.1474 3.566 32.8347 27.3555 23.1148 19.7928 17.1591 15.0463 13.3317 11.9246 10.7574 9.7791 8.2438 7.1050 6.6418 6.2335 5.5482 4.9966 4.1659 3.550 3.91961 31.4236 25.7298 21.4822 18.2599 15.57619 13.8007 12.2335 13.9617 9.718 8.3405 7.1050 6.6418 6.2335 5.5482 4.9966 4.1659 3.550 3.91961 31.4236 25.7298 21.4822 18.2559 15.7619 13.8007 12.2335 19.9617 9.718 8.3405 7.1050 6.6418 6.2335 5.5482 4.9966 4.1659 3.550 3.91961 31.4236 25.7298 21.4822 18.2559 15.7619 13.8007 12.2335 19.9617 9.718 8.3405 7.1050 6.6418 6.2335 5.5482 4.9966 4.1659 3.550 3.91961 31.4236 25.7298 21.4822 18.2559 15.7619 13.8007 12.2335 19.9617 9.718 8.3405 7.1050 6.6418 6.2335 5.5482 4.9966 4.1659 3.550 3.91961 31.4236 25.7298 21.4822 18.2559 15.7619 13.8007 12.2335 19.9617 9.718 8.3405 7.1050 6.6418 6.2335 5.5482 4.9966 4.1659 3.550 3.91961 31.4236 25.7298 27.6756 27.6751 18.9399 14.6164 3.9327 14.0009 1.000000000000000	10	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601	7.0236	6.7101											2.9304
12 11.2551 10.5753 9.9540 9.3851 8.8633 8.3838 7.9427 7.5361 7.1607 6.8137 6.1944 5.6603 5.4206 5.1971 4.7932 4.4392 3.8514 3.31 12.1337 11.3484 10.6350 9.9856 9.3936 8.8527 8.3577 7.9038 7.4869 7.1034 6.4235 5.8424 5.5831 5.3423 4.9095 4.5327 3.9124 3.43 13.0037 12.1062 11.2961 10.5631 9.8986 9.2950 8.7455 8.2442 7.7862 7.3667 6.6282 6.0021 5.7245 5.4675 5.0081 4.6106 3.9616 3.44 15.36651 12.8493 11.9379 11.1184 10.3797 9.7122 9.1079 8.5595 8.0607 7.6061 6.8109 6.1422 5.8474 5.5755 5.0916 4.6755 4.0013 3.46 14.7179 13.5777 12.5611 11.6523 10.8378 10.1059 9.4466 8.8514 8.3126 7.8237 6.9740 6.2651 5.9542 5.6685 5.1624 4.7296 4.0333 3.50 15.623 14.2919 13.1661 12.1657 11.2741 10.4773 9.7632 9.1216 8.5436 8.0216 7.1196 6.3729 6.0472 5.7487 5.2223 4.7746 4.0591 3.51 16.3983 14.9920 13.7535 12.6593 11.6896 10.8276 10.0591 9.3719 8.7556 8.2014 7.2497 6.4674 6.1280 5.8178 5.2732 4.8122 4.0799 3.52 17.2260 15.6785 14.3238 13.1339 12.0853 11.1581 10.3356 9.6036 8.9501 8.3649 7.3658 6.5504 6.1982 5.8775 5.3162 4.8435 4.0967 3.52 18.0456 16.3514 14.8775 13.5903 12.4622 11.4699 10.5940 9.8181 9.1285 8.5136 7.4694 6.6231 6.2593 5.9288 5.3527 4.8696 4.1103 3.54 12.8077 22.3965 19.6004 17.2920 15.3725 13.7648 12.4090 11.2578 10.2737 9.4269 8.0552 7.0027 6.5660 6.1772 5.5168 4.9789 4.1601 3.56 10.8284 10.9578 10.9737 9.791 8.2438 7.1050 6.6418 6.2335 5.5482 4.9966 4.1659 3.55 13.91961 31.4236 25.7298 21.4822 18.2559 15.7619 13.8007 12.2335 10.9617 9.7918 8.3045 7.1327 6.6605 5.2463 1.5541 4.9995 4.1666 3.57	11	10.3676	9.7868	9.2526	8.7605	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	5.9377	5.4527	5.2337	5.0286	4.6560	4.3271	3 7757	3.3351	2.9776
13 12.1337 11.3484 10.6350 9.9856 9.3936 8.8527 8.3577 7.9038 7.4869 7.1034 6.4235 5.8424 5.5831 5.3423 4.9095 4.5327 3.9124 3.47 13.0037 12.1062 11.2961 10.5631 9.8986 9.2950 8.7455 8.2442 7.7862 7.3667 6.6282 6.0021 5.7245 5.4675 5.0081 4.6106 3.9616 3.45 13.8651 12.8493 11.9379 11.1184 10.3797 9.7122 9.1079 8.5595 8.0607 7.6061 6.8109 6.1422 5.8474 5.5755 5.0916 4.6755 4.0013 3.46 14.7179 13.5777 12.5611 11.6523 10.8378 10.1059 9.4466 8.8514 8.3126 7.8237 6.9740 6.2651 5.9542 5.6685 5.1624 4.7296 4.0333 3.5061 17 15.5623 14.2919 13.1661 12.1657 11.2741 10.4773 9.7632 9.1216 8.5436 8.0216 7.1196 6.3729 6.0472 5.7487 5.2223 4.7746 4.0591 3.518 16.3983 14.9920 13.7535 12.6593 11.6896 10.8276 10.0591 9.3719 8.7556 8.2014 7.2497 6.4674 6.1280 5.8178 5.2732 4.8122 4.0799 3.52 11.2000 15.6785 14.3238 13.1339 12.0853 11.1581 10.3356 9.6036 8.9501 8.3649 7.3658 6.5504 6.1982 5.8775 5.3162 4.8435 4.0967 3.53 18.0456 16.3514 14.8775 13.5903 12.4622 11.4699 10.5940 9.8181 9.1285 8.5136 7.4694 6.6231 6.2593 5.9288 5.3527 4.8696 4.1103 3.54 14.8775 13.5903 12.7834 11.6536 10.6748 9.8226 9.0770 7.8431 6.8729 6.4641 6.0971 5.4669 4.9476 4.1474 3.566 32.8347 27.3555 23.1148 19.7928 17.1591 15.0463 13.3317 11.9246 10.7574 9.7791 8.2438 7.1050 6.6418 6.2335 5.5482 4.9966 4.1659 3.557 3.31944 1.9995 4.1666 3.557	12	11.2551	10.5753	9.9540	9.3851	8.8633	8.3838	7.9427	7.5361	7.1607	6.8137	6.1944	5.6603				-		3.3868	3.0133
14 13.0037 12.1062 11.2961 10.5631 9.8986 9.2950 8.7455 8.2442 7.7862 7.3667 6.6282 6.0021 5.7245 5.4675 5.0081 4.6106 3.9616 3.41 15 13.8651 12.8493 11.9379 11.1184 10.3797 9.7122 9.1079 8.5595 8.0607 7.6061 6.8109 6.1422 5.8474 5.5755 5.0916 4.6755 4.0013 3.46 14.7179 13.5777 12.5611 11.6523 10.8378 10.1059 9.4466 8.8514 8.3126 7.8237 6.9740 6.2651 5.9542 5.6685 5.1624 4.7296 4.0333 3.50 17 15.5523 14.2919 13.1661 12.1657 11.2741 10.4773 9.7632 9.1216 8.5436 8.0216 7.1196 6.3729 6.0472 5.7487 5.2223 4.7746 4.0591 3.51 18 16.3983 14.9920 13.7535 12.6593 11.6896 10.8276 10.0591 9.3719 8.7556 8.2014 7.2497 6.4674 6.1280 5.8178 5.2732 4.8122 4.0799 3.55 17.2260 15.6785 14.3238 13.1339 12.0853 11.1581 10.3356 9.6036 8.9501 8.3649 7.3658 6.5504 6.1982 5.8775 5.3162 4.8435 4.0967 3.53 18.0456 16.3514 14.8775 13.5903 12.4622 11.4699 10.5940 9.8181 9.1285 8.5136 7.4694 6.6231 6.2593 5.9288 5.3527 4.8696 4.1103 3.54 18.0456 19.5259 19.6004 17.2920 15.3725 13.7648 12.4090 11.2578 10.2737 9.4269 8.0552 7.0027 6.5660 6.1772 5.5168 4.9789 4.1601 3.56 1.0910 3.91961 31.4236 25.7298 21.4822 18.2559 15.7619 13.8007 12.2335 10.9617 9.7918 8.3045 7.1327 6.6605 6.2463 5.5541 4.9995 4.1666 3.57	13	12.1337	11.3484	10.6350	9.9856	9.3936	8.8527	8.3577	7.9038	7.4869	7.1034	6.4235							3.4272	3 0404
15 13.8651 12.8493 11.9379 11.1184 10.3797 9.7122 9.1079 8.5595 8.0607 7.6061 6.8109 6.1422 5.8474 5.5755 5.0916 4.6755 4.0013 3.46751 11.0013	14	13.0037	12.1062	11.2961	10.5631	9.8986	9.2950	8.7455	8.2442	7.7862	7,3667	6.6282	6.0021						3.4587	3.0609
17 15.5623 14.2919 13.1661 12.1657 11.2741 10.4773 9.7632 9.1216 8.5436 8.0216 7.1196 6.3729 6.0472 5.7487 5.2223 4.7726 4.0591 3.551 18 16.3983 14.9920 13.7535 12.6593 11.6896 10.8276 10.0591 9.3719 8.7556 8.2014 7.2497 6.4674 6.1280 5.8178 5.2732 4.8122 4.0799 3.551 17.2260 15.6785 14.3238 13.1339 12.0853 11.1581 10.3356 9.6036 8.9501 8.3649 7.3658 6.5504 6.1982 5.8775 5.3162 4.8435 4.0967 3.553 18.0456 16.3514 14.8775 13.5903 12.4622 11.4699 10.5940 9.8181 9.1285 8.5136 7.4694 6.6231 6.2593 5.9288 5.3527 4.8696 4.1103 3.540 18.0456 19.5251 17.4131 15.6221 14.0939 12.7834 11.6536 10.6748 9.8226 9.0770 7.8431 6.8729 6.4641 6.0971 5.4669 4.9476 4.1474 3.566 19.6258 19.6004 17.2920 15.3725 13.7648 12.4090 11.2578 10.2737 9.4269 8.0552 7.0027 6.5660 6.1772 5.5168 4.9789 4.1601 3.554 19.9184 17.1591 15.0463 13.3317 11.9246 10.7574 9.7791 8.2438 7.1050 6.6418 6.2335 5.5482 4.9966 4.1659 3.5755 13.91961 31.4236 25.7298 21.4822 18.2559 15.7619 13.8007 12.2335 19.9617 9.9148 8.3045 7.1327 6.6605 6.2463 3.5541 4.9995 4.1666 3.557	15	13.8651	12.8493	11.9379	11.1184	10.3797	9.7122	9.1079	8.5595	8.0607	7,6061	6.8109							3.4834	3.0764
17 15.5623 14.2919 13.1661 12.1657 11.2741 10.4773 9.7632 9.1216 8.5436 8.0216 7.1196 6.3729 6.0472 5.7487 5.2223 4.7746 4.0591 3.51 18 16.3983 14.9920 13.7535 12.6593 11.6896 10.8276 10.0591 9.3719 8.7556 8.2014 7.2497 6.4674 6.1280 5.8178 5.2732 4.8122 4.0799 3.52 17.2260 15.6785 14.3238 13.1339 12.0853 11.1581 10.3356 9.6036 8.9501 8.3649 7.3658 6.5504 6.1982 5.8775 5.3162 4.8435 4.0967 3.53 18.0456 16.3514 14.8775 13.5903 12.4622 11.4699 10.5940 9.8181 9.1285 8.5136 7.4694 6.6231 6.2593 5.9288 5.3527 4.8696 4.1103 3.54 18.0456 16.3514 14.8775 13.5903 12.7834 11.6536 10.6748 9.8226 9.0770 7.8431 6.8729 6.4641 6.0971 5.4669 4.9476 4.1474 3.56 10.35877 12.3965 19.6004 17.2920 15.3725 13.7648 12.4090 11.2578 10.2737 9.4269 8.0552 7.0027 6.5660 6.1772 5.5168 4.9789 4.1601 3.554 13.6437 13.6437 13.6438 13.3317 11.9246 10.7574 9.7791 8.2438 7.1050 6.6418 6.2335 5.5482 4.9966 4.1659 3.574 14.9950 31.7699 2.76756 2.5673 18.9393 14.1619 13.2757 14.0393 12.7893 14.6164 10.33757 14.0395 13.7699 2.76756 2.5673 18.9393 14.1616 13.3757 14.0395 13.7699 2.76756 2.7673 18.9393 14.1616 13.3757 14.0395 13.7699 2.76756 2.7673 18.9393 14.1616 13.3757 14.0395 13.7699 2.76756 2.7673 18.9393 14.1616 13.3757 14.0395 13.7699 2.76756 2.7673 18.9393 14.1616 13.3757 14.0395 13.7699 2.76756 2.7673 18.9393 14.1616 13.3757 14.0395 13.7699 2.76756 2.7673 18.9393 14.1616 13.3757 14.0395 13.7691 13.0305 13.7757 14.0393 14.1616 13.3757 14.0393 14.0393 14.1616 13.3757 14.0393 14.	16	14.7179	13.5777	12.5611	11.6523	10.8378	10.1059	9.4466	8.8514	8.3126	7.8237	6.9740	6.2651	5.9542	5.6685	5,1624	4.7296	4.0333	3.5026	3.0882
18 16.3983 14.9920 13.7535 12.6593 11.6896 10.8276 10.0591 9.3719 8.7556 8.2014 7.2497 6.4674 6.1280 5.8178 5.2732 4.8122 4.0799 3.52 17.2260 15.6785 14.3238 13.1339 12.0853 11.1581 10.3356 9.6036 8.9501 8.3649 7.3658 6.5504 6.1982 5.8775 5.3162 4.8435 4.0967 3.553 18.0456 16.3514 14.8775 13.5903 12.4622 11.4699 10.5940 9.8181 9.1285 8.5136 7.4694 6.6231 6.2593 5.9288 5.3527 4.8696 4.1103 3.540 18.0456 18.3514 14.8775 13.5903 12.7834 11.6536 10.6748 9.8226 9.0770 7.8431 6.8729 6.4641 6.0971 5.4669 4.9476 4.1474 3.566 18.3514 19.7928 17.1591 15.0463 13.3317 11.9246 10.7574 9.791 8.2438 7.1050 6.6418 6.2335 5.5482 4.9966 4.1659 3.573 13.7648 12.4090 11.2578 10.2737 9.791 8.2438 7.1050 6.6418 6.2335 5.5482 4.9966 4.1659 3.573 13.91961 31.4236 25.7298 21.4822 18.2559 15.7619 13.8007 12.2335 10.9617 9.9148 8.3045 7.1327 6.6605 6.2463 3.5541 4.9995 4.1666 3.57	17	15.5623	14.2919	13,1661	12,1657	11.2741	10.4773	9.7632	9.1216	8.5436	8.0216	7.1196	6.3729	6.0472	5.7487		4 7746		3.5177	3.0971
19 17.2260 15.6785 14.3238 13.1339 12.0853 11.1581 10.3356 9.6036 8.9501 8.3649 7.3658 6.5504 6.1982 5.8775 5.3162 4.8435 4.0967 3.55 20 18.0456 16.3514 14.8775 13.5903 12.4622 11.4699 10.5940 9.8181 9.1285 8.5136 7.4694 6.6231 6.2593 5.9288 5.3527 4.8696 4.1103 3.54 25 22.0232 19.5235 17.4131 15.6221 14.0939 12.7834 11.6536 10.6748 9.8226 9.0770 7.8431 6.8729 6.4641 6.0971 5.4669 4.9476 4.1474 3.566 30 25.8077 22.3965 19.6004 17.2920 15.3725 13.7648 12.4090 11.2578 10.2737 9.4269 8.0552 7.0027 6.5660 6.1772 5.5168 4.9789 4.1601 3.554 40 32.8347 27.3555 23.1148 19.7928 17.1591 15.0463 13.3317 11.9246 10.7574 9.7791 8.2438 7.1050 6.6418 6.2335 5.5482 4.9966 4.1659 3.57 50 39.1961 31.4236 25.7299 21.4822 18.2559 15.7619 13.8007 12.2335 10.9617 9.9148 8.3045 7.1327 6.6605 6.2463 3.5541 4.9995 4.1666 3.57	18	16.3983	14.9920	13.7535	12.6593	11.6896	10.8276	10,0591	9.3719	8.7556	8.2014	7.2497	6.4674	6.1280	5.8178				3.5294	3 1039
20 18.0456 16.3514 14.8775 13.5903 12.4622 11.4699 10.5940 9.8181 9.1285 8.5136 7.4694 6.6231 6.2593 5.9288 5.3527 4.8696 4.1103 3.54 25 22.0232 19.5235 17.4131 15.6221 14.0939 12.7834 11.6536 10.6748 9.8226 9.0770 7.8431 6.8729 6.4641 6.0971 5.4669 4.9476 4.1474 3.566 30 25.8077 22.3965 19.6004 17.2920 15.3725 13.7648 12.4090 11.2578 10.2737 9.4269 8.0552 7.0027 6.5660 6.1772 5.5168 4.9789 4.1601 3.566 32.8347 27.3555 23.1148 19.7928 17.1591 15.0463 13.3317 11.9246 10.7574 9.7791 8.2438 7.1050 6.6418 6.2335 5.5482 4.9966 4.1659 3.57 50 39.1961 31.4236 25.7298 21.4822 18.2559 15.7619 13.8007 12.2335 10.9617 9.9148 8.3045 7.1327 6.6605 6.2463 1.5541 4.9995 4.1666 3.57	19	17.2260	15.6785	14.3238	13.1339	12.0853	11.1581	10.3356	9.6036	8.9501	8.3649	7.3658	6.5504	6.1982	5 8775				3.5386	3.1090
30 25.8077 22.3965 19.6004 17.2920 15.3725 13.7648 12.4090 11.2578 10.2737 9.4269 8.0552 7.0027 6.5660 6.1772 5.5168 49789 4.1601 3.554 40 32.8347 27.3555 23.1148 19.7928 17.1591 15.0463 13.3317 11.9246 10.7574 9.7791 8.2438 7.1050 6.6418 6.2335 5.5482 4.9966 4.1659 3.57 50 39.1961 31.4236 25.7299 21.4822 18.2559 15.7619 13.8007 12.2335 10.9617 9.9148 8.3045 7.1327 6.6605 6.2463 3.5541 4.9995 4.1666 3.57 50 44.9550 34.7609 27.6736 27.6735 18.9293 16.1644 4.0392 14.7325 44.0498 0.0213	20	18.0456	16.3514	14.8775	13.5903	12.4622	11.4699	10.5940	9.8181	9.1285	8.5136	7.4694	6.6231						3.5458	
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