

**THE OPEN UNIVERSITY OF SRI LANKA**  
**MASTER OF BUSINESS ADMINISTRATION IN HUMAN RESOURCE**  
**MANAGEMENT**  
**FINAL EXAMINATION - 2017**  
**MCP 2132 – MANAGERIAL FINANCE**  
**DURATION THREE (03) HOURS**



**DATE : 09.07.2017**

**Total Marks 100**

**TIME : 01.30p.m. to 04.30p.m.**

*Important Instructions:*

*Total number of questions seven (07), Answer any five (05) questions. All questions carry equal marks. Show all workings. Use of Non-programmable calculator is allowed.*

**Question No (01)**

“A successful business enterprise often uses a goal-oriented financial structure. The financial manager performs certain tasks or functions that helps to achieve the goals of the finance department”.

- a) Define the term “Finance”. **(02 Marks)**
- b) Distinguish between Public Finance and Corporate Finance. **(04 Marks)**
- c) What are the challenges faced by the financial managers of modern day businesses organizations? **(04 Marks)**
- d) Why is maximizing wealth a better goal than maximizing profits? **(04 Marks)**
- e) Why the concepts of Time Value of Money (TVM) is widely applied in corporate finance decision making? Explain. **(06 Marks)**

**(Total 20 Marks)**

**Question No (02)**

Following information extracted from the financial statements of Hello Tel Company Ltd.

Published for the year 2016/2017

**Income Statement**

**(Rs.000)**

	2016/2017		2015/2016	
Sales		42,375		38,000
Cost of Sales		(30,375)		(27,500)
Gross profit		12,000		10,500
Other Income		355		200
		12,355		10,700
Distribution Expenses	1,880		2,100	

Administrative Expenses	4,836		5,354
Other Expenses	495		565
Financial Expenses	<u>520</u>		<u>616</u>
		(7,731)	(8,635)
Profit before Tax		4,624	2,065
Tax		(1,125)	(725)
Profit after Tax		<u>3,499</u>	<u>1,340</u>

## Statement of Financial Position

(Rs.'000)

	31.03.2017	31.03.2016
<b>Assets</b>		
<b>Non Current Assets</b>		
Property Plant & Equipment	27,066	28,777
Investment	4,110	-
Fixed Deposit	<u>3,900</u>	<u>3,900</u>
	35,076	32,677
<b>Current Assets</b>		
Inventory	3,120	2,160
Trade Receivables	4,560	2,480
Other Current Assets	-	30
Cash and Cash Equivalents	<u>430</u>	<u>390</u>
	8,110	5,060
<b>Total Assets</b>	<b><u>43,186</u></b>	<b><u>37,737</u></b>
<b>Equity &amp; Liabilities</b>		
<b>Equity</b>		
<b>Capital &amp; Reserves</b>		
Stated Capital	30,000	26,400
Reserves	5,010	5,010
Retained Profit	<u>2,776</u>	(73)
Total Equity	37,786	31,337
<b>Liabilities</b>		
<b>Non Current Liabilities</b>		
15% Bank Loan - Peoples Bank	1,500	1,800
<b>Current Liabilities</b>		
Trade Payables	2,085	2,314
Tax Payables	342	460
Dividend Payables – Preference Share	150	-
Current Portion of Loan Payable	<u>1,323</u>	<u>1,826</u>
	3,900	4,600
<b>Total Equity and Liabilities</b>	<b><u>43,186</u></b>	<b><u>37,737</u></b>

**Following additional information is also available**

1. During the year 2016/2017 Rs. 450,000/= and Rs. 200,000/= had been paid as dividends for ordinary shares and preference shares respectively. Rs. 200,000/= was paid in the year 2015/2016 as preference dividends.
2. The number of ordinary shares issued on 01.04.2016 was 1,000,000 and 200,000 new ordinary shares were issued on 01.01.2017 at a rate of Rs.18/= per share.
3. 80% of sales and 70% of purchases done on credit basis
4. Market price of ordinary shares was Rs.22/= on 31.03.2017 and it was Rs.16/= on 31.03.2016
5. Following balances are available at 31.03.2015
 

Stock	2,680,000/=
Trade Receivables	3,200,000/=
Trade Payables	2,922,000/=

- a. You are required to calculate the following ratios for both years 2016/2017 & 2015/2016

- |                                |  |
|--------------------------------|--|
| i Gross Profit Ratio           | vi Inventory Turnover period   |
| ii Net Profit Ratio            | vii Average Debtor collection period   |
| iii Return on Capital Employed | viii Average Period of Accounts Payable  |
| iv Current Ratio               | ix Earnings per Share  |
| v Quick Assets Ratio           | x Price Earnings Ratio (Treat the assets at the end of the year as average assets) |

**(10 Marks)**

- b. By using the above ratios, analyze the operational performance and financial position of the Hello Tel Company Ltd. compared to the previous year.

**(10 Marks)**

**(Total 20 Marks)**

**Question No (03)**

A baby rusk manufacturer produces a biscuit and sells at a market price of Rs.150/= per each packet. Costs related to this production is as follows.

	Cost Value (Rs.)
Direct material per unit	42
Direct Labour per unit	35
Direct other per unit	12
Overhead cost per unit - Variable	06
Fixed	07
Fixed Cost of the Production	3,000,000
Forecasted Sales in packets	70,000

- a) You are required to calculate
- Contribution per Unit (02 Marks)
  - Contribution to Sales (C/S) Ratio (02 Marks)
  - Break Even Point of new product in units & value in rupees (04 Marks)
  - Margin of Safety (02 Marks)
  - Profit of the entity (02 Marks)
- b) If selling price of a biscuit packet goes up by 5/= rupees, find the new Break Even Point in units? (02 Marks)
- c) Assume the manufacturer needs to achieve a target profit of Rs.1,000,000/= from this production during the specified period. How many biscuit packets should be sold to achieve this target profit before the price goes up as mentioned in (b)? (03 Marks)
- d) After the government imposed an import tax on raw material, the manufacturer forecasts that he needs to pay Rs.350,000/= additional tax. How many biscuit packets should be produced to cover tax liability and achieve target profit of Rs.1,000,000/= after the price goes up as mentioned in (b)?

(03 Marks)  
(Total 20 Marks)

**Question No (04)**

- a) ABC Ltd, manufactures range of consumable products. The chief Financial Officer (CFO) recently analyzed the profitability level of four products of similar nature with minor differentiations. Following are the information of month of May 2017.

Description (Products)	A	B	C	D	Total (Rs.000)
Sales (Rs.000)	130,000	360,000	250,000	180,000	920,000
Less Total Variable cost	50,000	300,000	180,000	100,000	630,000
Total Fixed cost	40,000	120,000	30,000	40,000	230,000
Profit/ (Loss)	40,000	(60,000)	40,000	40,000	60,000

Since the "Product B" suffers losses, the CFO suggested to the Management Accountant to shut down the operations of the "Product B".

Do you agree with this decision? Give your recommendations with necessary calculations.

(08 Marks)

- b) XYZ Enterprises, presents you following information related to three products namely X, Y and Z.

Products	X	Y	Z
Raw Material	12	18	12
Labour	6	2	1.50
Other direct	2	2	3.50
Overhead Cost – Variable	4	3	4
Overhead Cost – Fixed	8	4	2
Selling Price	35	29	25

Special raw material call “Beta” is imported for each of these X, Y, and Z products. Cost of 1Kg of the raw material “Beta” is Rs. 6/=. This month inventory records show 62,000Kg of Beta is available at warehouse for the production and during this month additional Beta cannot be imported under any circumstances.

Product X has stable demand. But product Y is manufactured only for special orders. Product Z has seasonal demand.

Month of December 2017, during the Christmas and year end following demand has been estimated by the management. Product X will have 12,500 and Z will have 11,000. However, product Y will have only 3,000 demand.

- i. Advise management what would be the optimal production mix?
- ii. Calculate the profit for the month of December 2017 under the optimal production mix?

**(12 Marks)**  
**(Total 20 Marks)**

**Question No (05)**

- a) What is meant by “Cost “of a product or service? **(02 Marks)**
- b) Mention three (03) specific instances under which cost information is used by managers of a manufacturing firm. **(06 Marks)**
- c) Lanka Furniture is a small-scale furniture manufacturing entity which recently accepted an order from Sigithi Pre-School to manufacture 100 Desks & Chairs. This is the only order accepted for the month of October 2016 by the manufacturer. Firm keeps a profit margin of 20% on selling price. Consider following information related to the order.

	Value in (Rs)
Opening inventory (wood) as at 01.10.2016	33,000
Expenses related to the business	
Purchased wood	827,000
Monthly rent paid for the business premise	75,000
Paint and Varnish	280,000
Monthly Salaries to employees	88,000
Electricity payable for October 2016	8,500
Supervisor Charges for this production	35,000
Machine repairs before production start	6,500
Nails and sundries	12,000
Machine depreciation calculated for this order	8,000
Closing inventory (wood) as at 31.10.2016	15,000

You are required to calculate following. Assume cost of a desk is twice greater than that of the cost of a chair. Clearly mention any other assumptions made by you in calculating the same.

- Total Cost relevant to the production of a Chair & a Desk
- Unit Cost of a Chair & a Desk
- Sales price of a Chair & a Desk.

**(12 Marks)**  
**(Total 20 Marks)**

**Question No (06)**

ABC Ltd is a company in the construction industry. Information in relation to one of its construction projects is given below.

Capital expenditure (Rs.'000)	300,000
Net Cash inflows (Rs.'000)	
Years 1	60,000
Years 2	90,000
Years 3	100,000
Years 4	120,000
Years 5	80,000

- You are required to calculate the discounted payback period of the project assuming required rate of return of the investor is 12%. **(08 Marks)**
- If the required rate of return of the investor is 10%, calculate net present value (NPV) and the internal rate of return (IRR) of the project. **(10 Marks)**
- Draw the diagram to reflect NPV and IRR curves of the above answer. **(02 Marks)**

**(Total 20 Marks)**

**Question No (07)**

- a) Briefly describe advantages of budgetary control. (8 Marks)  
 b) The following information is provided in respect of Usha Ltd.

Month 2017	Total Sales Rs.	Purchase Rs.	Salaries & Wages Rs.	Other Expenses Rs.
August	840,000	576,000	180,000	102,000
September	900,000	540,000	180,000	114,000
October	960,000	502,000	186,000	120,000
November	1,020,000	600,000	216,000	132,000
December	1,260,000	624,000	220,000	138,000

Additional information:

- Total Sales value include 80% of credit sales. 50% of credit sales are realized in the month following the sale and the remaining 50% in the second month.
- Creditors are paid within two months following the month of purchase.
- A delivery van will be purchased in the month of August 2017 at a cost of Rs. 1,600,000/=, with an initial payment of Rs. 400,000/= paid that month itself. The balance amount is payable in 12 equal installments, every other month, from the date of purchases.
- Annual depreciation charge of Rs. 60,000/= is included in other expenses mentioned above.
- Dividend income of 7 ½ % on ordinary share capital of Rs.1,600,000/= invested in an another outside company is due to be received in the month of October 2017.
- Salaries and wages and other expenses are paid in the same month.
- It is expected that cash balance on 1<sup>st</sup> October 2017 would be Rs. 90,000/=

You are required to prepare a Cash Budget for the three (3) months October, November and December 2017. Clearly show cash surplus or deficit in each month.

(12 Marks)

(Total 20 Marks)

(Total aggregate 100 Marks)

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Table A-3 Present Value Interest Factors for One Dollar Discounted at k Percent for n Periods:  $PVIF_{k,n} = 1 / (1 + k)^n$

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	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	0.8333	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	0.6944	0.6504	0.6400	0.5917
3	0.9706	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	0.5787	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	0.4823	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	0.4019	0.3411	0.3277	0.2693
6	0.9420	0.8880	0.8375	0.7903	0.7462	0.7050	0.6663	0.6302	0.5953	0.5645	0.5346	0.5066	0.4803	0.4556	0.4323	0.4104	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	0.2791	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	0.2326	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	0.1938	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	0.2946	0.2697	0.2472	0.2267	0.1615	0.1164	0.1074	0.0725
11	0.8963	0.8043	0.7224	0.6496	0.5847	0.5268	0.4751	0.4289	0.3875	0.3505	0.3173	0.2875	0.2607	0.2366	0.2149	0.1954	0.1346	0.0938	0.0869	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	0.1122	0.0737	0.0687	0.0429
13	0.8787	0.7730	0.6810	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	0.0935	0.0610	0.0560	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	0.0779	0.0492	0.0440	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	0.0649	0.0397	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	0.1229	0.1069	0.0930	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	0.0451	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	0.0376	0.0208	0.0180	0.0089
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	0.0313	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	0.0261	0.0135	0.0115	0.0053
21	0.8114	0.6598	0.5375	0.4388	0.3599	0.2942	0.2415	0.1987	0.1637	0.1351	0.1117	0.0926	0.0768	0.0638	0.0531	0.0443	0.0217	0.0109	0.0092	0.0040
22	0.8034	0.6468	0.5219	0.4220	0.3418	0.2775	0.2257	0.1839	0.1502	0.1228	0.1007	0.0826	0.0680	0.0560	0.0462	0.0382	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	0.1378	0.1117	0.0907	0.0738	0.0601	0.0491	0.0402	0.0329	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	0.0126	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	0.0105	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	0.0042	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	0.0017	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	0.0014	*	*	*
40	0.6717	0.4529	0.3066	0.2083	0.1420	0.0972	0.0688	0.0460	0.0318	0.0221	0.0154	0.0107	0.0075	0.0053	0.0037	0.0026	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	*	*	*	*



Table A-4 Present Value Interest Factors for a One-Dollar Annuity Discounted at k Percent for n Periods:  $PVIFA = [1 - 1/(1 + k)^n] / k$

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	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	0.8333	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	1.6684	1.6467	1.6257	1.6052	1.5278	1.4568	1.4400	1.3609
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	2.1065	1.9813	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	2.5887	2.4043	2.3816	2.1662
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	2.9906	2.7454	2.6893	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	3.3255	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	4.8694	4.7122	4.5638	4.4226	4.2883	4.1604	4.0386	3.6046	3.2423	3.1611	2.8021
8	7.6517	7.3255	7.0197	6.7327	6.4632	6.2098	5.9713	5.7466	5.5348	5.3349	5.1461	4.9676	4.7988	4.6389	4.4873	4.3436	3.8372	3.4212	3.3289	2.9247
9	8.5660	8.1622	7.7861	7.4353	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590	5.5370	5.3282	5.1317	4.9464	4.7716	4.6065	4.0310	3.5655	3.4631	3.0190
10	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601	7.0236	6.7101	6.4177	6.1446	5.8892	5.6502	5.4262	5.2161	5.0188	4.8332	4.1925	3.6819	3.5705	3.0915
11	10.368	9.7868	9.2526	8.7605	8.3064	7.8862	7.4987	7.1390	6.8052	6.4951	6.2065	5.9377	5.6869	5.4527	5.2337	5.0286	4.3271	3.7757	3.6564	3.1473
12	11.255	10.575	9.9540	9.3851	8.8633	8.3832	7.9427	7.5361	7.1607	6.8137	6.4924	6.1944	5.9176	5.6603	5.4206	5.1971	4.4392	3.8514	3.7251	3.1903
13	12.134	11.348	10.635	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	4.5327	3.9124	3.7801	3.2233
14	13.004	12.106	11.296	10.563	9.8986	9.2959	8.7455	8.2442	7.7862	7.3667	6.9819	6.6282	6.3025	6.0021	5.7245	5.4675	4.6106	3.9616	3.8241	3.2487
15	13.865	12.849	11.938	11.118	10.380	9.7122	9.1079	8.5595	8.0607	7.6061	7.1909	6.8109	6.4624	6.1422	5.8474	5.5755	4.6755	4.0013	3.8593	3.2682
16	14.718	13.578	12.561	11.652	10.838	10.105	9.4466	8.8514	8.3126	7.8237	7.3792	6.9740	6.6039	6.2661	5.9542	5.6685	4.7296	4.0333	3.8874	3.2832
17	15.562	14.292	13.166	12.166	11.274	10.477	9.7632	9.1216	8.5436	8.0216	7.5488	7.1196	6.7291	6.3729	6.0472	5.7487	4.7746	4.0591	3.9099	3.2948
18	16.398	14.992	13.754	12.659	11.690	10.823	10.059	9.3719	8.7556	8.2014	7.7016	7.2497	6.8399	6.4674	6.1280	5.8178	4.8122	4.0799	3.9279	3.3037
19	17.226	15.678	14.324	13.134	12.085	11.168	10.336	9.6036	8.9501	8.3649	7.8393	7.3658	6.9380	6.5404	6.1882	5.8775	4.8435	4.0967	3.9424	3.3105
20	18.046	16.351	14.877	13.590	12.462	11.470	10.594	9.8181	9.1285	8.5136	7.9633	7.4694	7.0248	6.6231	6.2593	5.9288	4.8696	4.1103	3.9539	3.3158
21	18.857	17.011	15.415	14.029	12.821	11.764	10.836	10.017	9.2922	8.6487	8.0751	7.5620	7.1016	6.6870	6.3125	5.9731	4.8913	4.1212	3.9631	3.3198
22	19.660	17.658	15.937	14.451	13.163	12.042	11.061	10.201	9.4424	8.7715	8.1757	7.6446	7.1695	6.7429	6.3587	6.0113	4.9094	4.1300	3.9705	3.3230
23	20.456	18.292	16.444	14.857	13.489	12.303	11.272	10.371	9.5802	8.8832	8.2664	7.7164	7.2297	6.7921	6.3988	6.0442	4.9245	4.1371	3.9764	3.3254
24	21.243	18.914	16.936	15.247	13.799	12.550	11.469	10.529	9.7066	8.9847	8.3481	7.7843	7.2829	6.8351	6.4338	6.0726	4.9371	4.1428	3.9811	3.3272
25	22.023	19.523	17.413	15.622	14.094	12.783	11.654	10.675	9.8226	9.0770	8.4217	7.8431	7.3300	6.8729	6.4641	6.0971	4.9476	4.1474	3.9849	3.3286
30	25.808	22.396	19.600	17.292	15.372	13.765	12.409	11.258	10.274	9.4269	8.6938	8.0552	7.4957	7.0027	6.5660	6.1772	4.9789	4.1601	3.9950	3.3321
35	29.409	24.999	21.487	18.665	16.374	14.498	12.948	11.655	10.567	9.6442	8.8552	8.1755	7.5856	7.0700	6.6166	6.2153	4.9915	4.1644	3.9984	3.3330
36	30.108	25.489	21.832	18.908	16.547	14.621	13.035	11.717	10.612	9.6765	8.8786	8.1924	7.5979	7.0790	6.6231	6.2201	4.9929	4.1649	3.9987	3.3331
40	32.835	27.355	23.115	19.793	17.169	15.046	13.332	11.925	10.757	9.7791	8.9511	8.2438	7.6344	7.1050	6.6418	6.2335	4.9966	4.1659	3.9995	3.3332
45	36.186	31.424	26.730	21.482	18.266	15.762	13.801	12.233	10.982	9.9148	9.0417	8.3045	7.6752	7.1327	6.6605	6.2463	4.9995	4.1666	3.9999	3.3333