
**CERTIFIED PUBLIC ACCOUNTANT
INTERMEDIATE LEVEL EXAMINATIONS**

I1.1: MANAGERIAL FINANCE

DATE: THURSDAY 28, NOVEMBER 2024

INSTRUCTIONS:

1. Time Allowed: **3 hours 15 minutes** (15 minutes reading and 3 hours writing).
2. This examination has **two** sections: **A & B**.
3. Section **A** has **three Compulsory Questions** while **B** has **three questions** of which **two Should be attempted**.
4. In summary attempt **five questions**.
5. Marks allocated to each question are shown at the end of the question.
6. Show all your workings where necessary

SECTION A

QUESTION ONE

a) NYAMIRAMBO Motors Repairs Ltd (NMR) is evaluating an investment plan to be undertaken during this financial year from 1st July 2024. The project manager has estimated that it will cost the company FRW 300 million and will have 5 years life span. The following table shows after tax cash flows:

Years	1	2	3	4	5
Cash flows FRW millions	85	90	95	100	95

The company's cost of capital is 12%

Required:

Calculate the modified internal rate of return (5 Marks)

b) MUHANGA Limited is a company located in Southern Province manufacturing animal feeds for local consumption; the company is planning to have machine replacement so that it increases its efficiency and reduces the cost of operation. The company's cost of capital is 10%, paying taxes at the corporate rate of 30% and requires capital of FRW 100 million to undertake the replacement of its assets.

Required:

Explain the five effects of taxation on investment decision (5 Marks)

c) JALI Manufactures Limited (JML) has a number of investment projects in Huye District. The company has been faced with an increase in price of commodities due to financial distress currently faced by companies across the world. During the last five years, there has been an increase in price of raw materials and labour cost at the rate of 4% and 3% per year respectively. The general price increase is 5%. Currently, the company is paying FRW 120 million and FRW 60 million for raw materials and labour respectively, which are expected to increase in a years' time at the same rate for 5 years. The company's cost of capital is 10%.

Required:

i) **Calculate the nominal cash flows that will be paid for the next 5 years.** (5 Marks)

ii) **Calculate the nominal (money) discounting rate.** (2 Marks)

iii) **State three rules that are used when the inflation rate is uniform during computation of the nominal cash flow.** (3 Marks)

(Total: 20 Marks)

QUESTION TWO

a) Rwanda Coffee Farmers Company Ltd is a listed company in Rwanda that deals in coffee products. It supplies coffee to different supermarkets and retail locations both domestically and internationally. The company has been operating in the last five years with more than 500 stores across East Africa. Due to recent changes in business environment, Rwanda's standing in the World Bank Doing Business report has significantly improved.

Extracts from the most recent financial statements of Rwanda Coffee Farmers Company Ltd are provided below:

Statements of Financial Position as at 31st December 2023

Non-current assets	FRW” Millions	FRW” Millions
Freehold property		1,000
Plant and Machinery		500
Goodwill		600
Investments		500
Current Assets		
Trade Receivables	500	
Inventories	400	
Cash and Cash Equivalents	200	1,100
Total assets		3,700
Equity and liabilities		
Share Capital (nominal FRW 2 per share)		1,000
Retained Earnings		980
Non-current liabilities		
12% Long Term Debt		1,000
Current Liabilities		
Trade and Other Payables	600	
Bank Loans and Overdrafts	120	720
Total Equity & Liabilities		3,700

Required:

Calculate three working capital ratios and interpret them.

(3 Marks)

b) Rwanda Manufacturing Limited (RML) specialises in the production of construction materials for both export and domestic markets. Although the company has shown favourable growth in recent years, challenges arose starting in 2020 due to the impact of the Covid-19 pandemic. The pandemic affected demand as construction activities were halted during lockdowns, leading to liquidity issues within the company. As the newly hired Finance Assistant, your main task is to assess the company's working capital management for management's strategic enhancements. The information provided for evaluation purposes are as follows:

Statement of Profit or Loss for the year ended 31st December 2023

	2023	2022
	FRW “Million”	FRW “Million”
Revenue/turnover	85,000	70,000
Cost of production	(30,000)	(20,000)
Gross Profit	55,000	50,000
Administration cost	(15,500)	(15,000)
Selling and distribution	(4,500)	(12,000)
Finance cost	(2,000)	(2,000)
Profit before tax	33,000	21,000
Tax @ 30%	9,900	(6,300)
Profit after tax	23,100	14,700

Statement of Financial position as at 31st December 2023

	2023	2022
	FRW “Million”	FRW “Million”
Non-current assets		
Freehold property	43,000	34,000
Current assets		
Inventory	30,000	26,000
Account receivables	32,860	36,800
Cash	25,240	27,700
Total assets	131,100	124,500
Equity & Liabilities		
Ordinary share capital FRW 700 per share	50,000	50,000
Retained earnings	19,400	18,000
Non-current Liabilities		

	2023	2022
	FRW “Million”	FRW “Million”
10% Debentures	20,000	20,000
Current Liabilities		
Trade Payables	36,000	32,000
Accrued expenses	5,700	4,500
Total Equity & Liabilities	131,100	124,500

Additional information:

1. It is the company’s policy to value its raw materials, work in progress and finished goods using the cost of production.
2. Working days are 365
3. Accrued expenses relates to unpaid administration cost
4. Inventory balances are:

Details	2023	2022
	FRW “Million”	FRW “Million”
Raw materials	10,000	5,000
Work in progress	4,000	10,000
Finished goods	16,000	11,000

Required:

Determine the company’s working capital cycle for the year 2023 (12 Marks)

c) Rwanda Tea Ltd is evaluating the option of investing in one of the two investment portfolios available in Rwanda. The company wants to minimize the risk associated with having undiversified business operations, especially after experiencing significant financial losses during market and economic hardships. The management is looking into potential investment opportunities to achieve diversification. They have opinion that the return on each individual investment portfolio is not connected to the return on any other investment. The estimated return on the market portfolio is 15%, and the risk-free rate of return is 5% and the market beta factor of 1.00. Details of the amount invested, expected return, standard deviation, and betas for each portfolio are provided below.

Portfolio A	Amount invested	Expected return	Total risk	Beta
East Africa Investments Ltd	FRW 50 million	20%	0.11	1.5
Venture Stage Investors	FRW 50 million	16%	0.09	0.8
Portfolio B	Amount invested	Expected return	Total risk	Beta
Satori Venture	FRW 50 million	22%	0.12	1.22
Africanus Investments Ltd	FRW 50 million	28%	0.16	1.44

Required:

Estimate the required rate of return of the two portfolios using the Capital Asset Pricing Model, and advise the management on which portfolio should be selected.

(5 Marks)

d) The capital pricing asset model has been criticized due to its unrealistic assumptions. Steven Ross developed arbitrage pricing theory (APT) to help investors when dealing with portfolio theory.

Required:

Explain two advantages and three disadvantages of the APT model.

(5 Marks)

(Total: 25 Marks)

QUESTION THREE

Great Lake Energy Ltd (GLE) is a company located in Musanze District. The company was founded in 2021 and specializes in the production of household goods. At this point, GLE's owners are curious about the value of their shareholding. They have hired you to use several methods of valuation to ascertain the company's value. The following information is provided below:

Statement of Financial Position as at 31st December 2023

Non-Current Assets	FRW “Million”	FRW “Million”
Freehold Land and Buildings		185
Plant and Machinery		63
IT equipment		40
Goodwill		71
Current Assets		
Inventories	420	
Trade Receivables	120	
Other Receivables	80	

	FRW “Million”	FRW “Million”
Cash in hand and at bank	200	820
Total assets		1,179
Equity and liabilities		
Equity and reserves		
Ordinary Share Capital (FRW 200 per share)		500
Retained Earnings		430
Non-current liabilities		
12% debentures		120
Current liabilities		
Trade and Other Payables	90	
Bank Overdrafts	39	129
Total equity and liabilities		1,179

There has been no interim dividend paid, and the dividends paid during the previous three years have remained at FRW 50 million annually. The value of the goodwill is decided by GLE Ltd.'s Directors based on their evaluation of the company's reputation and brand.

Additional Information related to the financial year 2024:

- 1) A receivable balance of FRW 24 million is included in trade receivables must be written off because the customer has entered liquidation.
- 2) An independent valuer was hired to value non-current assets and ascertain the following market values:
 - Plant and Machinery was valued at FRW 58 million.
 - Freehold Land and Buildings was valued at FRW 201 million.
- 3) The business pays taxes at 30% rate.
- 4) The company's goodwill increased to FRW 120 million, according to the management assessment of the company's brand name.
- 5) It was decided to employ asset-based models and the average P/E ratio for valuation reasons.
- 6) The company's P/E ratio was 6.4

A review of the previous year's Statement of profit or loss and Comprehensive Income reveals the following:

	2023 "FRW"	2022 "FRW"	2021 "FRW"
Operating profits	400,000,000	380,000,000	220,000,000
Profits before taxes	300,000,000	230,000,000	170,000,000
Profit after taxes	210,000,000	101,000,000	119,000,000
Dividend paid	50,000,000	50,000,000	50,000,000

Industry profits are expected to grow at a compounded annual rate of 5% according to independent research. The Directors of GLE Ltd expect profits to increase by 20% per annum in the next year.

Required:

- Calculate the value of the company using earnings model.** (4 Marks)
- Determine the value of GLE using asset-based model.** (5 Marks)
- Discuss the dividend irrelevant theory and company valuation (MM Theory)** (6 Marks)

(Total: 15 Marks)

SECTION B

QUESTION FOUR

a) **Define the term corporate social responsibility and give three arguments favouring corporate social responsibility to the company.** (4 Marks)

b) Prime Economic Ltd (PEL) is a venture capital company with its head office in Kigali City. As a small and start-up company, its executive management are evaluating the investment potential. The existing capital structure of Prime Economic Ltd (PEL) is given as follows:

S/N	Details	Amount (FRW "000")
1	Ordinary share capital (FRW 100 par value)	47,000
2	General reserves	12,000
3	12% Debentures (FRW 100 par value)	26,000
4	10% preference share capital (FRW 20 par value)	15,000
Total		100,000

The following additional information is available:

1. Ordinary share capital is currently selling at FRW 85 each
2. 12% Debentures are being sold at FRW 92 each
3. 10% preference shares are at FRW 35 each.
4. PEL most recently paid dividend was FRW 14 per share and is expected to grow at the rate of 10%.
5. The corporate income tax rate is 30%.

Required:

- i) **Define the term “Venture Capital”** (2 Marks)
- ii) **Calculate the cost of capital for each component in the capital structure.** (6 Marks)

c) Kagano Musha Investment Ltd is a company 100% financed by equity while Kaneza Investment Trust Ltd is a company which is financed by debt valued at FRW 10,000,000 at interest rate of 12%. Both companies during the financial year ended 31st December 2023 had Earnings Before Interest and Tax (EBIT) amounting to FRW 110,000,000 and all companies are in the same class of business risk with the cost of capital of 10%.

Required:

- i) **As a CPA student, you are requested to compute the value of each firm and comment on the result obtained** (3 Marks)
- ii) **Give two assumptions of Modigliani-Miller hypothesis (MM).** (2 Marks)

d) Market value of the firm depends on the business risk of the firm and is independent of the financial mix. **List three assumptions of the Net Operating Income approach to capital structure.**

(3 Marks)

(Total: 20 Marks)

QUESTION FIVE

a) Alpha Limited is a company operating in Kivu district dealing with motor vehicle assembly and other motor vehicle spare parts. The Managing Director of the company during the Annual General Meeting suggested that the current procurement policy of procuring stock in advance is no longer profitable to the company which according to him (Managing Director) the company is paying for a cost that can be avoided. Currently, the company has been using economic order quantity model of inventory management which the procurement manager is confident that it is the best policy. The Finance Manager has differed with his counterpart and according to him Just In Time model should be adopted.

Required:

Explain five advantages that Alpha Limited would enjoy if they adopt just-in-time model.

(5 Marks)

b) Phonex Limited is planning to change its current stock management policy. The management currently orders 200,000 units of electrical appliances when their reorder level hits 70,000 units. The company's forecasted annual usage of stock is valued at FRW 1,250 million. The cost of placing an order is FRW 500 and the carrying cost of 10% of the purchase price. The purchase price is FRW 1,000. The company's lead time is 14 days and the operation of the firm is evenly for 52 weeks a year.

Required:

i) **Determine the optimal stock level** (3 Marks)

ii) **Calculate the relevant cost** (2 Marks)

c) Bokasa Limited operates in the Northern Province dealing in merchandised products and has been concerned with the current operation of the business. The Finance Manager has requested his Accountant to examine the financial data of the business because he feels that they are overtrading and has provided the following comparative financial statements of the company.

Bokasa Limited statement of financial position as at 31st December

	2023 “FRW”	2022 “FRW”
Noncurrent asset	154,000	140,000
Inventory	112,000	80,000
Account receivable	56,000	40,000
Cash in hand	15,000	12,000
Total assets	337,000	272,000
Equity and liabilities		
Equity		
Ordinary shares capital	97,000	97,000
Retain profits	11,660	9,520
Long term liabilities		
10% bank loan	9,840	19,840
Current liabilities		
Account payable	186,340	125,480
Taxation	8,000	6,000
Bank overdraft	24,160	14,160
Total equity and liabilities	337,000	272,000

Bokasa Limited comparative income statement for the year ended 31st December

	2023 “FRW”	2022 “FRW”
Sales	500,000	400,000
Cost of sales	375,000	300,000
Gross profit	125,000	100,000
Operating cost	50,000	40,000
Operating profit	75,000	60,000
Loan interest	984	1,984
Corporate tax	7,026	5,734
Profit after tax	66,990	52,282
Dividend paid	55,330	42,762

The firm operates 360 days a year.

Required:

Compute the following ratios:

- i) Current ratio (2 Marks)
- ii) Quick ratio (1 Mark)
- iii) Debtors’ collection period in days (1 Mark)
- iv) Inventory days (1 Mark)
- v) Asset turnover ratio (2 Marks)

- vi) **Comment if the company is overtrading basing on liquidity ratio, turnover ratio and efficiency ratio computed above.** (3 Marks)
(Total: 20 Marks)

QUESTION SIX

a) Rwandoha Foundation was established by high-net-worth family of Rwandoha with the mission of investing in different profit-making projects while also keeping 30% of total fund held in its philanthropic sub-fund. The Investment Manager of the foundation has identified a potential project of producing cement from volcanic rocks in the northern province of Rwanda. However, the local authority has strongly required investment manager to consider all issues around Environmental, Social and Governance (ESG) to avoid negative externalities to surrounding population.

Required:

Advise the Investment Manager on four factors to consider related to ESG in whole planning and implementation of the project. (8 Marks)

- b) **Identify four key stakeholders and key interests each will have in business that Rwandoha Foundation is considering.** (8 Marks)
- c) **Identify and explain one unethical behavior that the Chief Executive Officer can have and that of Human Resource Manager in an organization** (4 Marks)

(Total: 20 Marks)

Present value interest factor of Fw1 per period at i% for n periods, PVIF(i,n).																				
Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.074	0.065
16	0.853	0.728	0.623	0.534	0.458	0.394	0.339	0.292	0.252	0.218	0.188	0.163	0.141	0.123	0.107	0.093	0.081	0.071	0.062	0.054
17	0.844	0.714	0.605	0.513	0.436	0.371	0.317	0.270	0.231	0.198	0.170	0.146	0.125	0.108	0.093	0.080	0.069	0.060	0.052	0.045
18	0.836	0.700	0.587	0.494	0.416	0.350	0.296	0.250	0.212	0.180	0.153	0.130	0.111	0.095	0.081	0.069	0.059	0.051	0.044	0.038
19	0.828	0.686	0.570	0.475	0.396	0.331	0.277	0.232	0.194	0.164	0.138	0.116	0.098	0.083	0.070	0.060	0.051	0.043	0.037	0.031
20	0.820	0.673	0.554	0.456	0.377	0.312	0.258	0.215	0.178	0.149	0.124	0.104	0.087	0.073	0.061	0.051	0.043	0.037	0.031	0.026
25	0.780	0.610	0.478	0.375	0.295	0.233	0.184	0.146	0.116	0.092	0.074	0.059	0.047	0.038	0.030	0.024	0.020	0.016	0.013	0.010
30	0.742	0.552	0.412	0.308	0.231	0.174	0.131	0.099	0.075	0.057	0.044	0.033	0.026	0.020	0.015	0.012	0.009	0.007	0.005	0.004
35	0.706	0.500	0.355	0.253	0.181	0.130	0.094	0.068	0.049	0.036	0.026	0.019	0.014	0.010	0.008	0.006	0.004	0.003	0.002	0.002
40	0.672	0.453	0.307	0.208	0.142	0.097	0.067	0.046	0.032	0.022	0.015	0.011	0.008	0.005	0.004	0.003	0.002	0.001	0.001	0.001
50	0.608	0.372	0.228	0.141	0.087	0.054	0.034	0.021	0.013	0.009	0.005	0.003	0.002	0.001	0.001	0.001	0.000	0.000	0.000	0.000

Present value interest factor of an (ordinary) annuity of Frw1 per period at i% for n periods, PVIFA(i,n).																				
Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170	3.102	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355	4.231	4.111	3.998	3.889	3.784	3.685	3.589	3.498	3.410	3.326
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868	4.712	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335	5.146	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759	5.537	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145	5.889	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.192
11	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495	6.207	5.938	5.687	5.453	5.234	5.029	4.836	4.656	4.486	4.327
12	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814	6.492	6.194	5.918	5.660	5.421	5.197	4.988	4.793	4.611	4.439
13	12.134	11.348	10.635	9.986	9.394	8.853	8.358	7.904	7.487	7.103	6.750	6.424	6.122	5.842	5.583	5.342	5.118	4.910	4.715	4.533
14	13.004	12.106	11.296	10.563	9.899	9.295	8.745	8.244	7.786	7.367	6.982	6.628	6.302	6.002	5.724	5.468	5.229	5.008	4.802	4.611
15	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.559	8.061	7.606	7.191	6.811	6.462	6.142	5.847	5.575	5.324	5.092	4.876	4.675
16	14.718	13.578	12.561	11.652	10.838	10.106	9.447	8.851	8.313	7.824	7.379	6.974	6.604	6.265	5.954	5.668	5.405	5.162	4.938	4.730
17	15.562	14.292	13.166	12.166	11.274	10.477	9.763	9.122	8.544	8.022	7.549	7.120	6.729	6.373	6.047	5.749	5.475	5.222	4.990	4.775
18	16.398	14.992	13.754	12.659	11.690	10.828	10.059	9.372	8.756	8.201	7.702	7.250	6.840	6.467	6.128	5.818	5.534	5.273	5.033	4.812
19	17.226	15.678	14.324	13.134	12.085	11.158	10.336	9.604	8.950	8.365	7.839	7.366	6.938	6.550	6.198	5.877	5.584	5.316	5.070	4.843
20	18.046	16.351	14.877	13.590	12.462	11.470	10.594	9.818	9.129	8.514	7.963	7.469	7.025	6.623	6.259	5.929	5.628	5.353	5.101	4.870
25	22.023	19.523	17.413	15.622	14.094	12.783	11.654	10.675	9.823	9.077	8.422	7.843	7.330	6.873	6.464	6.097	5.766	5.467	5.195	4.948
30	25.808	22.396	19.600	17.292	15.372	13.765	12.409	11.258	10.274	9.427	8.694	8.055	7.496	7.003	6.566	6.177	5.829	5.517	5.235	4.979
35	29.409	24.999	21.487	18.665	16.374	14.498	12.948	11.655	10.567	9.644	8.855	8.176	7.586	7.070	6.617	6.215	5.858	5.539	5.251	4.992
40	32.835	27.355	23.115	19.793	17.159	15.046	13.332	11.925	10.757	9.779	8.951	8.244	7.634	7.105	6.642	6.233	5.871	5.548	5.258	4.997
50	39.196	31.424	25.730	21.482	18.256	15.762	13.801	12.233	10.962	9.915	9.042	8.304	7.675	7.133	6.661	6.246	5.880	5.554	5.262	4.999

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