

5

SULIT



BAHAGIAN PEPERIKSAAN DAN PENILAIAN
JABATAN PENDIDIKAN POLITEKNIK
KEMENTERIAN PENDIDIKAN TINGGI

JABATAN PERDAGANGAN

PEPERIKSAAN AKHIR
SESI DISEMBER 2015

DPB 2033: BUSINESS MATHEMATICS

TARIKH : 11 APRIL 2016
MASA : 8.30 AM – 10.30 AM (2JAM)

Kertas ini mengandungi SEMBILAN (9) halaman bercetak.
Struktur (4 soalan)

Dokumen sokongan yang disertakan : Jadual PVIF & PVIFA

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIARAHKAN

(CLO yang tertera hanya sebagai rujukan)

SULIT

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**

CLO1
C1

- (a) Identify the value of x .

Dapatkan nilai x .

i. $5x - 6 = 3x - 8$

[2 marks]

[2 markah]

ii. $2x^2 - x - 1 = 0$

[3 marks]

[3 markah]

CLO1
C3

- (b) DNkids Products produces a new toy with RM2.00 variable cost per unit. If the fixed cost is RM70,000 and each unit is sold at RM8.00, calculate the number of units that need to be sold in order to get a profit of RM50,000.

DNkids Products menghasilkan satu mainan baru dengan harga kos berubah seunit ialah RM2.00. Jika kos tetap adalah RM70,000 dan setiap unit dijual pada harga RM8.00, kirakan bilangan unit yang perlu dijual bagi mendapat keuntungan sebanyak RM50,000.

[5 marks]

[5 markah]

CLO1
C3

- (c) A refrigerator factory had sold all its products. The total cost (RM) of producing x refrigerator per week is $C(x) = 200x + 2000$. The demand function (RM) is estimated as $P(x) = 500 - 2x$. Determine:

Sebuah kilang peti sejuk telah menjual semua produk beliau. Jumlah kos (RM) bagi menghasilkan x peti sejuk setiap minggu ialah $C(x) = 200x + 2000$. Fungsi permintaan (RM) dianggarkan sebagai $p = 500 - 2x$. Kenalpasti:

- i. The marginal revenue function.

Fungsi hasil marginal.

[4 marks]

[4 markah]

- ii. The marginal cost function.

Fungsi kos marginal

[1 mark]

[1 markah]

- iii. The number of units per week that should be produced in order to maximize the profit.

Bilangan unit setiap minggu yang perlu dihasilkan untuk memaksimumkan keuntungan.

[6 marks]

[6 markah]

- iv. The price per unit to maximize the profit.

Harga seunit untuk memaksimumkan keuntungan.

[2 marks]

[2 markah]

- v. The maximum profit obtained.

Keuntungan maksimum yang diperolehi.

[2 marks]

[2 markah]

QUESTION 2***SOALAN 2***

RM 3000

02 JANUARY 2015

Ten months after the above date, I promise to pay Madam Mama Som RM : Three Thousand Ringgit Only for the value received with simple interest at 10% per annum, both the principal and interest payable in Malaysian Currency.

10 bulan selepas tarikh ini, saya berjanji untuk membayar Puan Mama Som RM : Tiga Ribu Ringgit Sahaja bagi nilai yang diterima dengan faedah ringkas 10% setahun, kedua principal dan faedah dibayar dengan Matawang Malaysia.



- (a) The above note was discounted at a bank 3 months before the maturity date. It was discounted at the rate of 12%. (Use approximate time). You are required to:

Nota di atas telah didiskaunkan 3 bulan sebelum tarikh matang kepada sebuah bank. Ia telah didiskaunkan pada kadar 12%. (Menggunakan masa anggaran).
Anda dikehendaki untuk:

- i. Define the promissory note.

Definisi nota janji.

[2 marks]

[2 markah]

- ii. Identify the maturity date.

Kira tarikh matang.

[2 marks]

[2 markah]

- iii. Calculate the maturity value.

Kirakan nilai matang.

[3 marks]

[3 markah]

CLO1
C1

CLO1
C1

CLO1
C1

CLO1
C1

iv. Calculate the proceed.

Kirakan hasil.

[3 marks]

[3 markah]

(b) Mr. Aizam wants to buy a semi detached house at Alam Sari worth RM750,000. The developers required 10% as down payment and the balance of price can be borrowed from the financial institution which offers at 7.5% per annum for 25 years. Besides, Mr. Aizam also had to pay extra payment such as lawyer fee as RM6,000 and insurance, RM5,700. You are required to calculate:

Encik Aizam ingin membeli sebuah rumah berkembar di Alam Sari bernilai RM750,000. Encik Aizam dikehendaki untuk membayar 10% sebagai wang pendahuluan oleh pemaju dan baki selebihnya boleh mendapatkan pembiayaan dari institusi kewangan yang mana menawarkan pada kadar 7.5% setahun bagi tempoh 25 tahun. Selain itu, Encik Aizam juga perlu membuat pembayaran tambahan seperti yuran peguam, RM6,000 dan insurans, RM5,700. Anda dikehendaki untuk mengira:

CLO1
C2

(i) The total interest

Jumlah faedah

[6 marks]

[6 markah]

CLO1
C2

(ii) The monthly payment

Bayaran bulanan

[4 marks]

[4 markah]

CLO1
C4

- (c) Lily Rose invested a sum of money, RM X for 9 years and 6 months. This investment was offered 5% compounded semi-annually with future value, RM15,347.04. You are required to calculate X value.

Lily Rose melaburkan sejumlah wang, RM X selama 9 tahun dan 6 bulan.

Pelaburan ini ditawarkan 5% dikompaun setiap setengah tahun dengan nilai, RM15,347.04. Anda dikehendaki untuk mengira nilai X.

[5 marks]

[5 markah]

QUESTION 3

SOALAN 3

REAL STEEL Company is planning to buy a new machine. They were offered with TWO (2) machines which will cost RM150,000 for Machine A and RM175,000 for Machine B. The estimated cash flow for each machines are given as follows:

Syarikat REAL STEEL merancang untuk membeli mesin baru. Mereka ditawarkan DUA (2) buah mesin yang memerlukan kos sebanyak RM150,000 untuk Mesin A dan RM175,000 untuk Mesin B. Anggaran kos tunai dari setiap projek adalah diberikan seperti berikut :

| Year <i>Tahun</i> | Cash Flow <i>Aliran Tunai</i> | |
|-----------------------------------|----------------------------------|-----------------------------|
| | Machine A <i>Mesin A</i> | Machine B <i>Mesin B</i> |
| 1 | RM 20,000 | - |
| 2 | RM 35,000 | 35,000 |
| 3 | RM 40,000 | 50,000 |
| 4 | RM 35,500 | 54,500 |
| 5 | RM 55,000 | 58,000 |
| Total <i>Jumlah</i> | 185,500 | 197,500 |
| Scrap Value <i>Nilai Skrap</i> | RM 4,500 | Nil |

Based on the information above, calculate :-

Berdasarkan maklumat di atas, kirakan :-

(a) i. Payback Period

Kadar Bayaran Balik

[4 marks]

[4 markah]

ii. Average Rate of Return

Kadar Pulangan Purata

[6 marks]

[6 markah]

CLO 2
C1

CLO 2
C3

- (b) Net Present Value at discount rate 2%.

Nilai Kini Bersih pada kadar diskau 2%.

[10 marks]

[10 markah]

CLO 2
C4

- (c) Based on the above calculation, which project should be selected? Why?

*Berdasarkan pengiraan di atas, projek mana yang perlu dipilih?**Mengapa?*

[5 marks]

[5 markah]

QUESTION 4**SOALAN 4**CLO2
C1

- (a) List
- THREE (3)**
- categories of assignment problem.

*Senaraikan **TIGA (3)** kategori masalah tugasan.*

[5 marks]

[5 markah]

CLO2
C2

- (b) Percetakan Keluarga AA Sdn Bhd, is a publishing company headquartered in Damansara, wants to hire three university graduates, Aida, Adam and Adriana at the branches in Wangsa Maju, Batu Caves and Klang. Cost (RM) to allocate each location is presented in the following table.

Percetakan Keluarga AA Sdn Bhd, sebuah syarikat penerbitan beribupejabat di Damansara, mahu mengupah tiga graduan universiti, Aida, Adam dan Adriana ke cawangan di Wangsa Maju, Batu Caves dan Klang. Peruntukan kos (RM) untuk setiap lokasi disediakan dalam jadual berikut.

| Office \ Workers | Wangsa Maju | Batu Caves | Klang |
|------------------|-------------|------------|-------|
| Aida | 800 | 1100 | 1200 |
| Adam | 500 | 1600 | 1300 |
| Adriana | 500 | 1000 | 2300 |

Identify the optimum assignment of personnel to company?

Kenalpasti tugasakan kakitangan yang optimum untuk syarikat?

[20 marks]

[20 markah]

SOALAN TAMAT

Present value interest factor of an ordinary annuity (PVIIFA)

| 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 | 0.862 | 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 | |
| 3 | 2.941 | 2.884 | 2.829 | 2.775 | 2.722 | 2.673 | 2.624 | 2.577 | 2.531 | 2.487 | 2.442 | 2.402 | 2.361 | 2.322 | 2.283 | 2.246 | 2.210 | 2.174 | 2.140 | |
| 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 | |
| 5 | 4.853 | 4.747 | 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 | 3.332 | 3.274 | 3.199 | 3.058 | |
| 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 | |
| 7 | 6.728 | 6.472 | 6.230 | 5.988 | 5.582 | 5.002 | 4.582 | 4.230 | 3.806 | 3.5206 | 3.198 | 2.868 | 2.4712 | 2.1423 | 1.74288 | 1.4160 | 1.0391 | 3.606 | 3.326 | |
| 8 | 7.652 | 7.320 | 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 | |
| 9 | 8.566 | 8.162 | 7.786 | 7.435 | 7.080 | 6.802 | 6.515 | 6.247 | 5.995 | 5.739 | 5.537 | 5.328 | 5.132 | 4.946 | 4.772 | 4.607 | 4.451 | 4.303 | 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 | |
| 11 | 10.368 | 9.787 | 9.253 | 8.760 | 8.306 | 7.887 | 7.499 | 7.138 | 6.805 | 6.495 | 6.207 | 5.938 | 5.687 | 5.453 | 5.234 | 5.029 | 4.836 | 4.656 | 4.486 | |
| 12 | 11.255 | 10.575 | 9.954 | 9.385 | 8.854 | 8.353 | 7.943 | 7.536 | 7.161 | 6.814 | 6.492 | 6.194 | 5.918 | 5.660 | 5.421 | 5.197 | 4.988 | 4.793 | 4.639 | |
| 13 | 12.138 | 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 | 5.535 | 5.342 | 5.118 | 4.910 | 4.715 | |
| 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 | |
| 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 | 5.87 | 5.575 | 5.324 | 5.092 | 4.876 | |
| 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 | 5.934 | 5.668 | 5.405 | 5.162 | 4.938 | |
| 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 | |
| 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 | |
| 19 | 17.226 | 15.678 | 14.324 | 13.134 | 12.085 | 11.158 | 10.336 | 9.604 | 8.950 | 8.365 | 7.839 | 7.386 | 6.938 | 6.567 | 6.198 | 5.877 | 5.584 | 5.316 | 5.070 | |
| 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 | 5.354 | 5.101 | |
| 21 | 18.857 | 17.014 | 15.415 | 14.029 | 12.821 | 11.764 | 10.836 | 10.017 | 9.292 | 8.649 | 8.075 | 7.582 | 7.102 | 6.687 | 6.312 | 5.973 | 5.665 | 5.384 | 5.127 | |
| 22 | 19.660 | 17.658 | 15.937 | 14.451 | 13.163 | 12.042 | 11.061 | 10.201 | 9.442 | 8.772 | 8.176 | 7.645 | 7.170 | 6.743 | 6.359 | 6.011 | 5.696 | 5.410 | 5.149 | |
| 23 | 20.456 | 18.292 | 16.444 | 14.857 | 13.489 | 12.303 | 11.272 | 10.371 | 9.580 | 8.883 | 8.266 | 7.718 | 7.230 | 6.792 | 6.399 | 6.044 | 5.723 | 5.432 | 5.167 | |
| 24 | 21.243 | 18.914 | 16.936 | 15.247 | 13.799 | 12.550 | 11.529 | 10.529 | 9.707 | 8.985 | 8.348 | 7.784 | 7.283 | 6.835 | 6.434 | 6.073 | 5.746 | 5.451 | 5.182 | |
| 25 | 22.023 | 19.523 | 17.143 | 15.622 | 14.094 | 12.783 | 11.094 | 10.198 | 9.165 | 8.422 | 7.843 | 7.330 | 6.873 | 6.464 | 6.097 | 5.766 | 5.467 | 5.195 | 4.937 | |
| 26 | 22.795 | 20.121 | 17.877 | 15.983 | 14.375 | 13.003 | 11.826 | 10.810 | 9.929 | 9.161 | 8.488 | 7.896 | 7.372 | 6.906 | 6.491 | 6.118 | 5.783 | 5.480 | 5.206 | |
| 27 | 23.560 | 20.707 | 18.327 | 16.330 | 14.641 | 13.241 | 11.987 | 10.932 | 10.027 | 9.137 | 8.548 | 7.943 | 7.441 | 6.935 | 6.544 | 6.136 | 5.798 | 5.492 | 5.215 | |
| 28 | 24.316 | 21.281 | 18.764 | 16.663 | 14.898 | 13.406 | 12.137 | 11.051 | 10.116 | 9.307 | 8.602 | 7.984 | 7.441 | 6.961 | 6.534 | 6.152 | 5.810 | 5.502 | 5.223 | |
| 29 | 25.066 | 21.844 | 19.883 | 16.984 | 15.147 | 13.591 | 12.278 | 11.559 | 10.798 | 9.370 | 8.650 | 8.022 | 7.470 | 6.983 | 6.557 | 6.166 | 5.820 | 5.510 | 5.223 | |
| 30 | 25.808 | 22.396 | 19.600 | 17.292 | 15.372 | 13.765 | 12.409 | 11.258 | 10.274 | 9.427 | 8.694 | 8.035 | 7.496 | 7.003 | 6.566 | 6.177 | 5.829 | 5.517 | 5.235 | |
| 31 | 26.542 | 22.938 | 20.000 | 17.588 | 15.593 | 13.929 | 12.532 | 11.350 | 10.343 | 9.479 | 8.733 | 8.085 | 7.518 | 7.020 | 6.579 | 6.187 | 5.837 | 5.523 | 5.239 | |
| 32 | 27.270 | 23.468 | 20.389 | 17.874 | 15.803 | 14.084 | 12.647 | 11.435 | 10.406 | 9.526 | 8.769 | 8.112 | 7.538 | 7.035 | 6.591 | 6.196 | 5.844 | 5.528 | 5.243 | |
| 33 | 27.990 | 23.989 | 20.766 | 18.148 | 16.003 | 14.230 | 12.754 | 11.574 | 10.644 | 9.706 | 8.901 | 8.35 | 7.556 | 7.048 | 6.600 | 6.203 | 5.849 | 5.532 | 5.246 | |
| 34 | 28.703 | 24.499 | 21.132 | 18.411 | 16.193 | 14.368 | 12.854 | 11.587 | 10.518 | 9.609 | 8.829 | 8.157 | 7.572 | 7.060 | 6.609 | 6.210 | 5.854 | 5.536 | 5.249 | |
| 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 | |
| 36 | 30.108 | 25.489 | 21.832 | 18.908 | 16.547 | 14.621 | 13.035 | 11.717 | 10.612 | 9.677 | 8.879 | 8.192 | 7.608 | 7.079 | 6.623 | 6.220 | 5.862 | 5.541 | 5.253 | |
| 37 | 30.800 | 25.969 | 22.167 | 19.143 | 16.711 | 14.737 | 13.117 | 11.775 | 10.653 | 9.706 | 8.900 | 8.208 | 7.609 | 7.087 | 6.629 | 6.224 | 5.865 | 5.543 | 5.255 | |
| 38 | 31.485 | 26.441 | 22.492 | 19.368 | 16.868 | 14.846 | 13.193 | 11.829 | 10.691 | 9.817 | 8.977 | 8.262 | 7.647 | 7.114 | 6.648 | 6.238 | 5.874 | 5.553 | 5.261 | |
| 39 | 32.163 | 26.903 | 22.808 | 19.584 | 17.017 | 14.949 | 13.265 | 11.879 | 10.726 | 9.757 | 8.936 | 8.233 | 7.652 | 7.117 | 6.650 | 6.239 | 5.875 | 5.551 | 5.260 | |
| 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 | 6.652 | 6.241 | 5.869 | 5.547 | 5.257 | |
| 41 | 33.500 | 27.799 | 23.412 | 19.993 | 17.294 | 15.138 | 13.394 | 11.967 | 10.787 | 9.799 | 8.965 | 8.253 | 7.641 | 7.126 | 6.654 | 6.242 | 5.873 | 5.548 | 5.258 | |
| 42 | 34.158 | 28.235 | 23.701 | 20.186 | 17.423 | 15.225 | 13.452 | 12.007 | 10.813 | 9.817 | 8.977 | 8.262 | 7.664 | 7.126 | 6.656 | 6.243 | 5.878 | 5.553 | 5.261 | |
| 43 | 34.810 | 28.662 | 23.982 | 20.374 | 17.546 | 15.383 | 13.558 | 12.077 | 10.861 | 9.849 | 8.999 | 8.276 | 7.657 | 7.126 | 6.654 | 6.243 | 5.879 | 5.554 | 5.262 | |
| 44 | 35.455 | 29.080 | 24.254 | 20.549 | 17.663 | 15.406 | 13.606 | 12.108 | 10.881 | 9.863 | 9.016 | 8.288 | 7.664 | 7.133 | 6.656 | 6.244 | 5.880 | 5.553 | 5.261 | |
| 45 | 36.1095 | 29.490 | 24.519 | 20.720 | 17.774 | 15.456 | 13.606 | 12.137 | 10.900 | 9.875 | 9.024 | 8.293 | 7.668 | 7.140 | 6.657 | 6.245 | 5.887 | 5.558 | 5.262 | |
| 46 | 36.727 | 29.892 | 24.775 | 20.885 | 17.880 | 15.524 | 13.650 | 12.137 | 10.900 | 9.875 | 9.036 | 8.304 | 7.671 | 7.141 | 6.658 | 6.246 | 5.888 | 5.554 | 5.262 | |
| 47 | 37.354 | 30.287 | 25.025 | 21.043 | 17.985 | 15.589 | 13.692 | 12.164 | 10.918 | 9.881 | 9.043 | 8.313 | 7.672 | 7.142 | 6.659 | 6.247 | 5.889 | 5.558 | 5.262 | |
| 48 | 37.974 | 30.673 | 25.267 | 21.195 | 18.077 | 15.630 | 13.730 | 12.189 | 10.934 | 9.887 | 9.050 | 8.304 | 7.673 | 7.143 | 6.660 | 6.248 | 5.890 | 5.564 | 5.262 | |
| 49 | 38.588 | 31.052 | 25.502 | 21.341 | 18.169 | 15.708 | 13.767 | 12.212 | 10.948 | 9.906 | 9.036 | 8.304 | 7.675 | 7.144 | 6.661 | 6.249 | 5.891 | 5.565 | 5.262 | |
| 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 | 7.145 | 6.662 | 6.246 | 5.892 | 5.566 | 5.262 | |

Present value interest factor (PVIF)

| Period | 1% | 2% | 3% | 4% | 5% | 6% | 7% | 8% | 9% | 10% | 11% | 12% | 13% | 14% | 15% | 16% | 17% | 18% | 19% |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| 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 | |
| 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 | |
| 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 | |
| 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 | |
| 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 | |
| 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 | |
| 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 | |
| 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 | |
| 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 | |
| 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 | |
| 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 | |
| 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 | |
| 13 | 0.879 | 0.773 | 0.681 | 0.601 | 0.530 | 0.469 | 0.415 | 0.368 | 0.326 | 0.289 | 0.258 | 0.229 | 0.204 | 0.182 | 0.163 | 0.145 | 0.130 | 0.116 | |
| 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 | |
| 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 | |
| 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 | 0.074 | |
| 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 | |
| 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 | |
| 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 | 0.044 | |
| 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 | |
| 21 | 0.811 | 0.660 | 0.538 | 0.439 | 0.359 | 0.294 | 0.242 | 0.199 | 0.164 | 0.135 | 0.112 | 0.093 | 0.077 | 0.064 | 0.053 | 0.044 | 0.037 | 0.031 | |
| 22 | 0.803 | 0.647 | 0.522 | 0.422 | 0.342 | 0.278 | 0.226 | 0.184 | 0.150 | 0.123 | 0.101 | 0.083 | 0.068 | 0.056 | 0.046 | 0.038 | 0.032 | 0.026 | |
| 23 | 0.795 | 0.634 | 0.507 | 0.406 | 0.326 | 0.262 | 0.211 | 0.170 | 0.138 | 0.112 | 0.091 | 0.074 | 0.060 | 0.049 | 0.040 | 0.033 | 0.027 | 0.022 | |
| 24 | 0.788 | 0.622 | 0.492 | 0.390 | 0.310 | 0.247 | 0.197 | 0.158 | 0.126 | 0.102 | 0.082 | 0.066 | 0.053 | 0.043 | 0.035 | 0.028 | 0.023 | 0.019 | |
| 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 | |
| 26 | 0.772 | 0.598 | 0.464 | 0.361 | 0.281 | 0.220 | 0.172 | 0.135 | 0.106 | 0.084 | 0.066 | 0.053 | 0.042 | 0.033 | 0.026 | 0.021 | 0.017 | 0.014 | |
| 27 | 0.764 | 0.586 | 0.450 | 0.347 | 0.268 | 0.207 | 0.161 | 0.125 | 0.098 | 0.076 | 0.060 | 0.047 | 0.037 | 0.029 | 0.023 | 0.018 | 0.014 | 0.011 | |
| 28 | 0.757 | 0.574 | 0.437 | 0.333 | 0.255 | 0.196 | 0.150 | 0.116 | 0.090 | 0.069 | 0.054 | 0.042 | 0.033 | 0.026 | 0.020 | 0.016 | 0.012 | 0.010 | |
| 29 | 0.749 | 0.563 | 0.424 | 0.321 | 0.243 | 0.185 | 0.141 | 0.107 | 0.082 | 0.063 | 0.048 | 0.037 | 0.029 | 0.022 | 0.017 | 0.014 | 0.011 | 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 | 0.005 | |
| 31 | 0.735 | 0.541 | 0.400 | 0.296 | 0.220 | 0.164 | 0.123 | 0.092 | 0.069 | 0.052 | 0.040 | 0.030 | 0.023 | 0.017 | 0.013 | 0.010 | 0.008 | 0.004 | |
| 32 | 0.727 | 0.531 | 0.388 | 0.285 | 0.210 | 0.155 | 0.115 | 0.083 | 0.063 | 0.047 | 0.035 | 0.027 | 0.020 | 0.015 | 0.011 | 0.009 | 0.005 | 0.003 | |
| 33 | 0.720 | 0.520 | 0.377 | 0.274 | 0.200 | 0.146 | 0.107 | 0.079 | 0.058 | 0.043 | 0.032 | 0.024 | 0.018 | 0.013 | 0.010 | 0.007 | 0.006 | 0.003 | |
| 34 | 0.713 | 0.510 | 0.366 | 0.264 | 0.190 | 0.138 | 0.100 | 0.073 | 0.053 | 0.039 | 0.029 | 0.021 | 0.016 | 0.012 | 0.009 | 0.005 | 0.004 | 0.003 | |
| 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 | |
| 36 | 0.699 | 0.490 | 0.345 | 0.244 | 0.173 | 0.123 | 0.088 | 0.063 | 0.045 | 0.032 | 0.023 | 0.017 | 0.012 | 0.009 | 0.007 | 0.005 | 0.004 | 0.003 | |
| 37 | 0.692 | 0.481 | 0.335 | 0.234 | 0.164 | 0.116 | 0.082 | 0.058 | 0.041 | 0.029 | 0.015 | 0.011 | 0.008 | 0.006 | 0.004 | 0.003 | 0.002 | 0.001 | |
| 38 | 0.685 | 0.471 | 0.325 | 0.225 | 0.157 | 0.109 | 0.076 | 0.054 | 0.038 | 0.027 | 0.019 | 0.013 | 0.010 | 0.007 | 0.005 | 0.004 | 0.003 | 0.002 | |
| 39 | 0.678 | 0.462 | 0.316 | 0.217 | 0.149 | 0.103 | 0.071 | 0.050 | 0.035 | 0.024 | 0.017 | 0.012 | 0.009 | 0.006 | 0.004 | 0.003 | 0.002 | 0.001 | |
| 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 | |
| 41 | 0.665 | 0.444 | 0.298 | 0.200 | 0.135 | 0.092 | 0.062 | 0.043 | 0.029 | 0.020 | 0.014 | 0.010 | 0.007 | 0.005 | 0.004 | 0.003 | 0.002 | 0.001 | |
| 42 | 0.658 | 0.435 | 0.289 | 0.193 | 0.129 | 0.087 | 0.058 | 0.039 | 0.027 | 0.018 | 0.012 | 0.009 | 0.006 | 0.004 | 0.003 | 0.002 | 0.001 | 0.000 | |
| 43 | 0.652 | 0.427 | 0.281 | 0.185 | 0.123 | 0.082 | 0.055 | 0.037 | 0.025 | 0.017 | 0.011 | 0.008 | 0.005 | 0.004 | 0.003 | 0.002 | 0.001 | 0.000 | |
| 44 | 0.645 | 0.418 | 0.272 | 0.178 | 0.117 | 0.077 | 0.051 | 0.034 | 0.023 | 0.015 | 0.010 | 0.007 | 0.005 | 0.003 | 0.002 | 0.001 | 0.000 | 0.000 | |
| 45 | 0.639 | 0.410 | 0.264 | 0.171 | 0.114 | 0.073 | 0.048 | 0.031 | 0.021 | 0.014 | 0.009 | 0.006 | 0.004 | 0.003 | 0.002 | 0.001 | 0.000 | 0.000 | |
| 46 | 0.633 | 0.402 | 0.257 | 0.165 | 0.106 | 0.069 | 0.044 | 0.029 | 0.019 | 0.012 | 0.008 | 0.005 | 0.004 | 0.002 | 0.001 | 0.000 | 0.000 | 0.000 | |
| 47 | 0.626 | 0.394 | 0.249 | 0.158 | 0.104 | 0.065 | 0.042 | 0.027 | 0.017 | 0.011 | 0.007 | 0.005 | 0.003 | 0.002 | 0.001 | 0.000 | 0.000 | 0.000 | |
| 48 | 0.620 | 0.387 | 0.242 | 0.152 | 0.096 | 0.061 | 0.039 | 0.025 | 0.016 | 0.010 | 0.007 | 0.004 | 0.003 | 0.002 | 0.001 | 0.000 | 0.000 | 0.000 | |
| 49 | 0.614 | 0.379 | 0.235 | 0.146 | 0.092 | 0.036 | 0.023 | 0.015 | 0.009 | 0.006 | 0.004 | 0.002 | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | |
| 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 | 0.000 | 0.000 | 0.000 | 0.000 | |