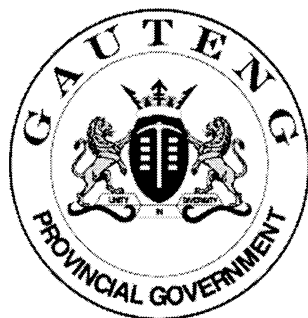


SENIOR CERTIFICATE EXAMINATION
SENIORSERTIFIKAAT-EKSAMEN



FEBRUARY / MARCH
FEBRUARIE / MAART

2005

**COMMERCIAL
MATHEMATICS**

HANDELSWISKUNDE



403-2/0

COMMERCIAL MATHEMATICS SG

10 pages
10 bladsye



X05

COPYRIGHT RESERVED / KOPIEREG VOORBEHOU
APPROVED BY UMALUSI / GOEDGEKEUR DEUR UMALUSI



GAUTENGSE DEPARTEMENT VAN ONDERWYS
SENIORSERTIFIKAAT- EKSAMEN

HANDELSWISKUNDE SG

TYD: 3 uur

PUNTE: 300

BENODIGHEDE:

- Handelstabelle S_n a_n
- Grafiekpapier
- Inligtingsbladsye is aan die einde van hierdie vraestel voorsien. Jy mag hierdie inligting gebruik om hierdie eksamenvraestel te beantwoord.

INSTRUKSIES:

- Beantwoord AL die vrae.
- Alle berekeninge moet getoon word. Antwoorde moet korrek tot die naaste sent of twee desimale plekke gegee word.
- Skryf die vraagnommer bokant elke antwoord.
- Moenie in die kantlyne skryf nie.
- Jy mag 'n sakrekenaar vir alle berekeninge gebruik, behalwe Vraag 1.2.
- Netheid en die sistematiese ordening van jou werk sal in jou guns tel.
- Gebruik handelstabelle om Vraag 8 te beantwoord.
- Gebruik die grafiekpapier wat verskaf word om Vraag 10 te beantwoord.
- $\pi = \frac{22}{7}$

VRAAG 1

- 1.1 Die beraamde getal mense in Gauteng (tussen die ouderdomme van 10 en 69 jaar) wat gedurende 2003 nuut met MIV geïnfekteer is, is soos volg:

OUDERDOM	TOTAAL
10 – 19	97
20 – 29	77
30 – 39	340
40 – 49	214
50 – 59	77
60 – 69	35

Bereken die

- | | | |
|-------|--|-----|
| 1.1.1 | gemiddelde | (4) |
| 1.1.2 | modus en | (3) |
| 1.1.3 | die mediaan van mense wat in 2003 nuut met MIV geïnfekteer is. | (5) |

**GAUTENG DEPARTMENT OF EDUCATION
SENIOR CERTIFICATE EXAMINATION**

COMMERCIAL MATHEMATICS SG

TIME: 3 hours

MARKS: 300

REQUIREMENTS:

- Commercial Tables S_n a_n
- Graph Paper
- Information Sheets have been provided at the end of this examination paper. You may use this information to answer this examination paper.

INSTRUCTIONS:

- Answer ALL the questions.
- All calculations must be shown. Answers must be given correct to the nearest cent or two decimal places.
- Write the number of the question above each answer.
- Do not write in the margins.
- You may use a calculator for all calculations except Question 1.2.
- Neatness and the systematic arrangement of your work will count in your favour.
- Use commercial tables when answering Question 8.
- Use the graph paper provided when answering Question 10.
- $\pi = \frac{22}{7}$

QUESTION 1

- 1.1 The estimated number of people in Gauteng (between the ages of 10 and 69 years) newly infected with HIV during 2003 is as follows:

AGE	TOTAL
10 – 19	97
20 – 29	77
30 – 39	340
40 – 49	214
50 – 59	77
60 – 69	35

Calculate the

- 1.1.1 mean (4)
 1.1.2 mode and (3)
 1.1.3 median of people newly infected with HIV during 2003. (5)

1.2 Vereenvoudig **sonder** die gebruik van 'n sakrekenaar.

$$\frac{5}{6} \div \left[\frac{2}{27} + \frac{2}{3} \right] \quad (6)$$

1.3 'n Koffiemengsel bestaan uit 15 kg teen R35,00 per kg en 25 kg sigorei teen R6,20 per kg. Bereken die gemiddelde kosprys van die mengsel per 250 g. (7)
[25]

VRAAG 2

2.1 Bereken 'n krediteur se eis indien hy R14 000 ontvang het uit 'n insolvente boedel wat 'n dividend van 33 $\frac{1}{3}$ sent in die Rand betaal het. (6)

2.2 Die bates van 'n insolvente boedel bestaan uit 'n som kontant van R9 240 en vaste eiendom waarop daar 'n verband van R160 000 bestaan, wat vir R150 000 verkoop is. Uitstaande skuld aan die boedel bedra R7 200 waarvan slegs 80% ingevorder kon word. Die trustees se uitgawes vir die administrasie van die boedel bedra R4 400 en konkurrente eise R11 200. Bereken die finale dividend in die Rand. (19)
[25]

VRAAG 3

3.1 'n Artikel wat R450 kos, word teen 'n wins van 25% op die verkoopprijs verkoop. Bereken die wins op die verkoopte artikel. (7)

3.2 'n Handelaar merk sy handelsware met 'n winsopslag van 30% op kosprys. Die gemerkte prys van 'n sekere artikel is R780. Tydens 'n uitverkoop verkoop hy hierdie artikel vir R700. Bereken die persentasie wins of verlies op kosprys op hierdie artikel. (14)

3.3 Deur 'n artikel vir R560 te verkoop maak 'n handelaar 25% op kosprys. Die groothandelaar waar hierdie artikel oorspronklik aangekoop is, merk al sy goedere 12% bokant die verkoopprijs.

3.3.1 Bereken die handelaar se kosprys op hierdie artikel. (7)

3.3.2 Bereken die groothandelaar se kosprys op hierdie artikel. (7)

[35]

VRAAG 4

4.1 Hoeveel aandele kan gekoop word deur 9 000% effekte teen 110 te verkoop en die bedrag ontvang in R2,50 gewone aandele teen R4,00 te belê? (8)

4.2 'n Belegger ontvang 'n jaarlikse dividend van R462 op 10,5% effekte.

Bereken

4.2.1 die nominale waarde van die effekte. (5)

4.2.2 die bedrag belê in die effekte indien dit teen 132,50 aangekoop is. (4)

1.2 Simplify **without** the use of a calculator.

$$\frac{5}{6} \div \left[\frac{2}{27} + \frac{2}{3} \right] \quad (6)$$

1.3 A coffee mixture consists of 15 kg pure coffee at R35,00 per kg and 25 kg chicory at R6,20 per kg. Calculate the average cost price of the mixture per 250 g.

(7)
[25]

QUESTION 2

2.1 Calculate a creditor's claim if he received R14 000 from an insolvent estate which paid a dividend of $33\frac{1}{3}$ cents in the Rand.

(6)

2.2 The assets of a bankrupt estate consisted of a cash sum of R9 240 and fixed property on which there was a bond of R160 000 and which was sold for R150 000. Outstanding debts owing to the estate amounted to R7 200 of which only 80% could be collected. The trustees' expenses for the administration of the estate amounted to R4 400 and concurrent claims to R11 200. Calculate the final dividend in the Rand.

(19)
[25]

QUESTION 3

3.1 An article costing R450 is sold at a profit of 25% on selling price. Calculate the profit on the article sold.

(7)

3.2 A dealer marks his goods at 30% above cost price. The marked price of a certain article is R780. During a sale he sells this article at R700. Calculate the percentage profit or loss on cost price of this article.

(14)

3.3 By selling an article for R560, a dealer gains 25% on cost price. The wholesaler where this article was originally purchased, marks all his goods at 12% above selling price.

3.3.1 Calculate the dealer's cost price for this article.

(7)

3.3.2 Calculate the wholesaler's cost price for this article.

(7)

[35]

QUESTION 4

4.1 How many shares can be bought by selling 9 000% stock at 110 and investing the amount received in R2,50 ordinary shares at R4,00?

(8)

4.2 An investor annually receives a dividend of R462 on 10,5% stock.

Calculate

4.2.1 the nominal value of the stock.

(5)

4.2.2 the amount invested in the stock if it was bought at 132,50.

(4)

- 4.3 Bereken watter van die volgende beleggings is die winsgewendste:
- 4.3.1 R30 aandele teen R36 per aandeel en ontvang R6 dividend per aandeel (4)
- 4.3.2 75c aandele teen 90c per aandeel waarop 'n 15% dividend verklaar is (6)
- 4.3.3 15% Goud R3 voorkeuraandele teen R2,25 (Ignoreer makelaarskoste en uitgawes.) (8)

[35]

VRAAG 5

- 5.1 Bepaal die oppervlakte van 'n sfeer met 'n radius van 7 m. (6)
- 5.2 'n Vierkantige grasperk met 'n oppervlakte van 841 m² word deur 'n paadjie van 2 m breed omring. Bereken die onkoste om die paadjie aan die buitekant te omhein teen R8,95 per meter. (6)
- 5.3 Die oppervlakte van 'n reghoekige driehoek, waarvan die basis 2 keer die hoogte is, is 144 cm². Bereken die basis van die driehoek. (7)
- 5.4 Die diameter van die bodem van 'n sirkelvormige dam is 14 m. Indien die dam 5 m hoog is, bereken die volume van die dam in liter (1 m³ = 1 kl). (11)

[30]

VRAAG 6

- 6.1 R750 word vir 9 maande geleen teen 18% p.j. enkelvoudige rente. Bereken die rente en die bedrag verskuldig na 9 maande. (8)
- 6.2 'n Handelaar hef 24% enkelvoudige rente op agterstallige rekeninge. 'n Betrokke debiteur se rekening kom te staan op R848 na 3 maande. Bepaal die aanvanklike bedrag van die debiteur se rekening. (8)
- 6.3 R9 000 is vir 6 jaar teen 13% per jaar, saamgestelde rente, jaarliks saamgestel. Bereken die opgelope bedrag aan die einde van hierdie tydperk. (8)
- 6.4 'n Bate van R12 500 word teen 33% per jaar gedepresieer op die afnemende saldo-metode. Bepaal die residuele waarde van die bate na twee jaar. (6)

[30]

VRAAG 7

- 7.1 Verdeel R1 900 tussen A, B, en C in die verhouding $\frac{1}{2} : \frac{1}{4} : \frac{1}{5}$. (7)
- 7.2 **A** en **B** begin 'n besigheid met kapitaalbeleggings van R10 500 en R4 000 onderskeidelik. Na 3 maande verhoog **B** sy kapitaal na R8 000. Die netto wins vir die jaar bedra R70 000, waarvan R9 000 opsy gesit is as 'n reserwefonds en rente op kapitaal word teen 'n koers van 12% per jaar toegestaan. Die oorblywende gedeelte van die wins word tussen **A** en **B** verdeel in verhouding tot die kapitaal wat hulle belê het. Wat is **B** se aandeel van die oorblywende wins? (23)

[30]

4.3 Calculate which of the following investments is most profitable:

- 4.3.1 R30 shares at R36 per share and received a dividend of R6 per share (4)
 4.3.2 75 c shares at 90 c per share on which a dividend of 15% is declared (6)
 4.3.3 15% Gold R3 preference shares at R2,25 (8)
 (Ignore brokerage and expenses.) (8)
[35]

QUESTION 5

- 5.1 Find the surface area of a sphere with a radius of 7 m. (6)
 5.2 A square lawn with an area of 841 m^2 is surrounded by a path, 2 m wide. Calculate the cost of fencing the outside of the path at R8,95 per metre. (6)
 5.3 The area of a right-angled triangle of which the base is 2 times the height, is 144 cm^2 . Calculate the base of the triangle. (7)
 5.4 The diameter of the floor of a circular dam is 14 m. If the height is 5 m, calculate the volume of the dam in litres ($1 \text{ m}^3 = 1 \text{ kl}$). (11)
[30]

QUESTION 6

- 6.1 R750 is borrowed for 9 months at 18% p.a. simple interest. Calculate the interest and amount owing after 9 months. (8)
 6.2 A dealer charges 24% simple interest on overdue accounts. A certain debtor's account amounted to R848 after 3 months. Find the original amount of the debtor's account. (8)
 6.3 R9 000 was invested for 6 years at 13% per annum compound interest, compounded yearly. Calculate the accumulated amount at the end of the period. (8)
 6.4 An asset of R12 500 was depreciated at 33% per annum using the diminishing balance method. Calculate the residual value of the asset after two years. (6)
[30]

QUESTION 7

- 7.1 Divide R1 900 among A, B and C in the ratio $\frac{1}{2} : \frac{1}{4} : \frac{1}{5}$. (7)
 7.2 **A** and **B** started a business with capital investments of R10 500 and R4 000 respectively. After 3 months **B** increased his capital to R8 000. The net profit for the year amounted to R70 000, of which R9 000 was set aside as a reserve and the interest on capital was allowed at the rate of 12% per annum. The remaining profits were divided between **A** and **B** according to the ratio of capital invested. What was **B**'s share of the remaining profit? (23)
[30]

VRAAG 8

Gebruik die handelstabelle aan die einde van die eksamenvraestel en bereken die volgende.

- 8.1 Bereken die jaarlikse paaïement om 'n lening van R400 000 teen 6% p.j. saamgestelde rente in 18 gelyke paaïemente af te los. (5)
- 8.2 Bereken die hoofsom wat aan die einde van elke jaar belê moet word om R30 000 na 15 jaar te lewer indien die belegging 8% per jaar saamgestelde rente verdien. (5)
- 8.3 Bereken die bedrag wat 'n persoon sal ontvang na 20 jaar indien hy/sy R10 000 aan die begin van elke jaar teen 4½% per jaar saamgestelde rente belê. (8)
- 8.4 Watter som word benodig om 'n annuïteit van R1 000 vir 20 jaar aan te koop teen 6% per jaar, indien die eerste paaïement onmiddellik betaalbaar is? (7)

[25]

VRAAG 9

- 9.1 'n Handelaar in Londen moes R8 193,78 betaal vir goedere wat hy in Suid-Afrika gekoop het. Hoeveel Britse pond het hy vir die goedere betaal? Aanvaar dat 'n wisselkoers van £1 = R13,6563 geld. (7)
- 9.2 Goedere word teen R70 000 gewaardeer. Die versekeringspremie is 25 sent per sent. Bereken die premie betaalbaar indien die polis die premie ook dek. (9)
- 9.3 Die munisipale tarieweskaal is soos gevolg:

	Eerste 6 kl	Gratis
	6 – 10 kl	R2,15
Watertoevoer (huishoudelik) per kl	10 – 20 kl	R3,25
	20 – 40 kl	R4,48
	meer as 40 kl	R5,58
Elektrisiteit (huishoudelik)	per kilowatt	23,67

Hoeveel sal die verbruiker vir elektrisiteit en vir water betaal indien hy/sy 1 038 kW elektrisiteit en 55 kl water gebruik het? (Ignoreer BTW.) (9)

[25]

QUESTION 8

Use the commercial tables at the end of this examination paper to calculate the following.

- 8.1 Calculate the annual instalment to redeem a loan of R400 000 at 6% per annum compound interest in 18 equal instalments. (5)
- 8.2 Calculate the principal to be invested at the end of each year to yield R30 000 after 15 years if the investment earns 8% per annum compound interest. (5)
- 8.3 Calculate the amount due to a person at the end of 20 years if he/she invests R10 000 at the beginning of each year at 4½% per annum compound interest. (8)
- 8.4 What sum is required to buy an annuity of R1 000 for 20 years at 6% per annum, if the first instalment is paid immediately? (7)
- [25]**

QUESTION 9

- 9.1 A trader in London had to pay R8 193,78 for goods purchased in South Africa. How many British pounds did he pay for the goods? Assume the exchange rate of £1 = R13,6563 is applicable. (7)
- 9.2 Goods are valued at R70 000. The insurance premium is 25 cents per cent. Calculate the premium payable if the policy also covers the premium. (9)
- 9.3 The municipality's scale of fees is as follows:

	First 6 kl	Free
	6 – 10 kl	R2,15
Water supply (domestic) per kl	10 – 20 kl	R3,25
	20 – 40 kl	R4,48
	More than 40 kl	R5,58
Electricity (domestic)	per kilowatt (kw)	23,67

How much does a consumer pay for electricity and for water if the consumer used 1 038 kW electricity and 55 kl of water? (Ignore VAT.) (9)

[25]

VRAAG 10

Die saamgestelde rente op R100 teen 5% p.j. word in die onderstaande tabel vir verskillende tydperke korrek tot die naaste R1 aangegee.

Jaar	0	2	5	10	15	20	25
Saamgestelde rente	0	10	28	63	108	165	239

10.1 Teken die grafiek om aan te toon hoe die saamgestelde rente oor tyd wissel.

Gebruik die skale:

Horisontale as : 2 cm verteenwoordig 5 jaar

Vertikale as : 2 cm verteenwoordig R50

(12)

Bepaal vanuit die grafiek:

10.1.1 Na hoeveel jaar sal die saamgestelde rente op R100 die bedrag van R75 haal?

(4)

10.1.2 Na hoeveel jaar sal die saamgestelde rente op R100 die bedrag van R225 haal?

(4)

10.1.3 Die saamgestelde rente op R100 na 21 jaar.

(4)

10.2 10.2.1 Teken die onderstaande tabel in jou antwoordboek oor en bereken die enkelvoudige rente op R100 vir 5% per jaar.

Jaar	2	5	25
Enkelvoudige rente in R			

(6)

10.2.2 Gebruik dieselfde asse in Vraag 10.1 en die tabel in Vraag 10.2.1 en teken 'n grafiek om aan te dui hoe die enkelvoudige rente op R100 wat teen 5% per jaar belê is oor tyd wissel.

(4)

10.2.3 Bepaal vanaf die twee grafieke die verskil tussen saamgestelde rente en enkelvoudige rente op R100 na 12 jaar.

(6)

[40]

TOTAAL: 300

QUESTION 10

The compound interest on R100 at 5% p.a. for different periods is given, correct to the nearest R1, in the table below.

Year	0	2	5	10	15	20	25
Compound Interest	0	10	28	63	108	165	239

10.1 Draw the graph showing how the compound interest varies with respect to the time.

Use the scales:

Horizontal Axis : 2 cm represents 5 years

Vertical Axis : 2 cm represents R50

(12)

From the graph find:

10.1.1 After how many years the compound interest on R100 will be R75? (4)

10.1.2 After how many years the compound interest on R100 will be R225? (4)

10.1.3 The compound interest on R100 after 21 years. (4)

10.2 10.2.1 Copy and complete the table below in your answer book and calculate the simple interest on R100 for 5% p.a.

Year	2	5	25
Simple Interest in R			

(6)

10.2.2 Using the same axes in Question 10.1 and the table in Question 10.2.1 draw a graph to show how the simple interest on R100 invested at 5% p.a. varies with respect to the time.

(4)

10.2.3 From the two graphs find the difference between the compound interest and the simple interest on R100 after 12 years.

(6)

[40]

TOTAL: 300

INFORMATION SHEET / INLIGTINGSBLAD

1. MENSURATION / METING

- 1.1 Right-angled triangle: / *Reghoekige driehoek*:
Area = $\frac{1}{2}$ base x height / *Area = $\frac{1}{2}$ basis x hoogte*
Theorem of Pythagoras: / *Stelling van Pythagoras*:
(hypotenuse)² = (base)² + (height)² / *(skuinssy)² = (basis)² + (hoogte)²*
- 1.2 Non right-angled triangle: / *Nie-reghoekige driehoek*:
Area of triangle when side lengths a, b, and c, are given / *Area van driehoek as die lengtes van sye a, b, en c gegee word*
 $A = \sqrt{s(s-a)(s-b)(s-c)}$ where $s = \frac{1}{2}(a+b+c)$ /
 $A = \sqrt{s(s-a)(s-b)(s-c)}$ waar $s = \frac{1}{2}(a+b+c)$
- 1.3 Circle: / *Sirkel*
Circumference (c) = $2\pi r$ / *Omtrek (c) = $2\pi r$*
Area of Circle: $A = \pi r^2$ / *Area van Sirkel : $A = \pi r^2$*
- 1.4 Triangular prism (base is a triangle):
Driehoekige prisma (basis is 'n driehoek):
Volume of prism = Area of base x height /
Volume van prisma = Area van basis x hoogte
- 1.5 Solid cylinder (circular prism): / *Soliede silinder (sirkelvormige prisma)*
Volume of cylinder: / *Volume van silinder*
 $V = \text{Area of base} \times \text{height} = \pi r^2 h$ / *$V = \text{Area van basis} \times \text{hoogte} = \pi r^2 h$*
Cylindrical pipe / *Silindriese pyp*
Volume of pipe(material): / *Volume van pyp(materiaal)*:
 $V = \pi R^2 h - \pi r^2 h$ where R is the external radius and r is the internal radius /
 $V = \pi R^2 h - \pi r^2 h$ waar R die eksterne radius en r die interne radius is
 $= \pi h (R-r)(R+r)$ / $= \pi h (R-r)(R+r)$
- 1.6 Sphere: / *Sfeer*
Area of sphere: / *Area van sfeer*:
 $A = 4\pi r^2$ / $A = 4\pi r^2$
Volume of sphere: / *Volume van sfeer*:
 $V = \frac{4}{3}\pi r^3$ / $V = \frac{4}{3}\pi r^3$

2. SIMPLE INTEREST / ENKELVOUDIGE RENTE

$$I = \frac{P \times R \times T}{100} \text{ where } I = \text{Simple Interest} / I = \frac{P \times R \times T}{100} \text{ waar } I = \text{Enkelvoudige Rente}$$

P = Principal / *Kapitaal*

R = Rate per cent per annum / *Koers per sent per annum*

T = Time / *Tyd*

$$P = \frac{A}{1+B}$$

$$P = \frac{A}{1 + \frac{RT}{100}}$$

3. COMPOUND INTEREST / SAAMGESTELDE RENTE

$$A = P \left(1 + \frac{r}{100} \right)^n \text{ where / waar}$$

A = Amount (at the end of the investment period) /
A = Bedrag (aan die einde van die beleggingsperiode)
P = principal (the money invested) /
P = kapitaal (geld wat belê is)
r = rate / r = koers
n = number of years / n = getal jare

4. INSURANCE / VERSEKERING

Insurance which also covers the premium: / *Versekering wat ook die premie dek:*

$$P = \frac{Vp}{V - p} \text{ where / waar}$$

V = value insured / V = versekerde waarde
p = premium due on value insured /
p = premie betaalbaar op versekerde waarde
P = total cost to insure the value as well as the premium /
P = totale koste om sowel die waarde as die premie te verseker

5. DEPRECIATION / WAARDEVERMINDERING

Formula for residual value: / *Formule vir reswaarde:*

$$RV = CP \left(1 - \frac{r}{100} \right)^n \text{ where / waar}$$

RV = residual value / reswaarde
CP = cost price / kosprys
r = rate of depreciation / waardeverminderingkoers
n = number of years / getal jare

Amount of R1 per annum at the end of the period

$$S_n \bar{1}$$

n	3½ %	4 %	4½ %	5 %	6 %	7 %	8 %	n
1	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1
2	2,0350	2,0400	2,0450	2,0500	2,0600	2,0700	2,0800	2
3	3,1062	3,1216	3,1370	3,1525	3,1826	3,2149	3,2464	3
4	4,2149	4,2465	4,2782	4,3101	4,3746	4,4399	4,5061	4
5	5,3625	5,4163	5,4707	5,5256	5,6371	5,7507	5,8666	5
6	6,5502	6,6330	6,7169	6,8019	6,9753	7,1533	7,3359	6
7	7,7794	7,8983	8,0192	8,1420	8,3938	8,6540	8,9228	7
8	9,0517	9,2142	9,3800	9,5491	9,8975	10,2598	10,6366	8
9	10,3685	10,5828	10,8021	11,0266	11,4913	11,9780	12,4876	9
10	11,7314	12,0061	12,2882	12,5779	13,1803	13,8164	14,4866	10
11	13,1420	13,4864	13,8412	14,2068	14,9716	15,7836	16,6455	11
12	14,6020	15,0258	15,4640	15,9171	16,8699	17,8885	18,9771	12
13	16,1130	16,6268	17,1599	17,7130	18,8821	20,1406	21,4953	13
14	17,6770	18,2919	18,9321	19,5986	21,0151	22,5505	24,2149	14
15	19,2957	20,0236	20,7841	21,5786	23,2760	25,1290	27,1521	15
16	20,9710	21,8245	22,7193	23,6575	25,6725	27,8881	30,3243	16
17	22,7050	23,6975	24,7417	25,8404	28,2129	30,8402	33,7502	17
18	24,4997	25,6454	26,8551	28,1324	30,9057	33,9990	37,4502	18
19	26,3572	27,6712	29,0636	30,5390	33,7600	37,3790	41,4463	19
20	28,2797	29,7781	31,3714	33,0660	36,7856	40,9955	45,7620	20
21	30,2695	31,9692	33,7831	35,7193	39,9927	44,8652	50,4229	21
22	32,3289	34,2480	36,3034	38,5052	43,3923	49,0057	55,4568	22
23	35,4604	36,6179	38,9370	41,5305	46,9958	53,4361	60,8933	23
24	36,6665	39,0826	41,6892	44,5020	50,8156	58,1767	66,7648	24
25	38,9499	41,6459	44,5652	47,7271	54,8645	63,2490	73,1059	25

Present value of R1 per annum for a period

$$a_n \bar{1}$$

n	3½ %	4 %	4½ %	5 %	6 %	7 %	8 %	n
1	0,9662	0,9615	0,9569	0,9524	0,9434	0,9346	0,9259	1
2	1,8997	1,8861	1,8727	1,8594	1,8334	1,8080	1,7833	2
3	2,8016	2,7751	2,7490	2,7232	2,6730	2,6243	2,5771	3
4	3,6731	3,6299	3,5875	3,5460	3,4651	3,3872	3,3121	4
5	4,5151	4,4518	4,3900	4,3295	4,2124	4,1002	3,9927	5
6	5,3286	5,2421	5,1579	5,0757	4,9173	4,7665	4,6229	6
7	6,1145	6,0021	5,8927	5,7864	5,5824	5,3893	5,2064	7
8	6,8740	6,7327	6,5959	6,4632	5,2098	5,9713	5,7466	8
9	7,6077	7,4353	7,2688	7,1078	6,8017	6,5152	6,2469	9
10	8,3166	8,1109	7,9127	7,7217	7,3601	7,0236	6,7101	10
11	9,0016	8,7605	8,5289	8,3064	7,8869	7,4987	7,1390	11
12	9,6633	9,3851	9,1186	8,8633	7,3838	7,9427	7,5361	12
13	10,3027	9,9856	9,6829	9,3936	8,8527	8,3577	7,9038	13
14	10,9205	10,5631	10,2228	9,8986	8,2950	7,7455	7,2444	14
15	11,5174	11,1184	10,7395	10,3797	9,7122	9,1079	8,5595	15
16	12,0941	11,6523	11,2340	10,8378	10,1059	9,4466	8,8514	16
17	12,6513	12,1657	11,7072	11,2741	10,4773	9,7632	9,1216	17
18	13,1897	12,6593	12,1600	11,6896	10,8276	10,0591	9,3719	18
19	13,7098	13,1339	12,5933	12,0853	11,1581	10,3356	9,6036	19
20	14,2124	13,5903	13,0079	12,4622	11,4699	10,5940	9,8181	20
21	14,6980	14,0292	13,4047	12,8212	11,7641	10,8355	10,0168	21
22	15,1671	14,4511	13,7844	13,1630	12,0416	11,0612	10,2007	22
23	15,6204	14,8568	14,1478	13,4886	12,3034	11,2722	10,3711	23
24	16,0584	15,2470	14,4955	13,7986	12,5504	11,4693	10,5288	24
25	16,4815	15,6221	14,8282	14,0939	12,7834	11,6536	10,6748	25

CANDIDATE'S NUMBER / KANDIDAAT SE NOMMER:

--	--	--	--	--	--

--	--	--	--

--	--	--

INSTRUCTIONS / INSTRUKSIES:

- Complete Question 10 on this graph paper, detach the page and place it at the back of your answer book.
- *Voltooi Vraag 10 op hierdie grafiekpapier, maak die bladsy los en plaas dit agter in jou antwoordboek.*

