SENIOR CERTIFICATE EXAMINATION
SENIORSERTIFIKAAT-EKSAMEN
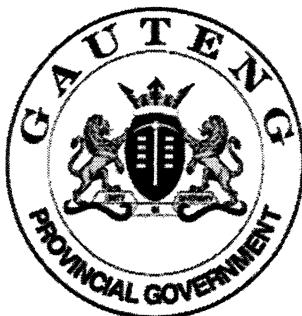
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2004

COMMERCIAL
MATHEMATICS

HANDELSWISKUNDE

SG **403-2/0**

10 pages
10 bladsye

COMMERCIAL MATHEMATICS SG

403 2 0   SG

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 wanneer jy Vraag 8 doen.
- 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 2000 nuut met MIV geïnfekteer is, is soos volg:

OUDERDOM	TOTAAL
10 – 19	77
20 – 29	57
30 – 39	320
40 – 49	194
50 – 59	57
60 – 69	15

Bereken die

1.1.1	gemiddelde	(4)
1.1.2	modus en	(3)
1.1.3	mediaan van mense wat in 2000 nuut met MIV geïnfekteer is.	(6)

b.o.

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 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 2000 is as follows:

AGE	TOTAL
10 – 19	77
20 – 29	57
30 – 39	320
40 – 49	194
50 – 59	57
60 – 69	15

Calculate the

1.1.1	mean	(4)
1.1.2	mode and	(3)
1.1.3	median of people newly infected with HIV during 2000.	(6)

P.T.O.

1.2 Vereenvoudig **sonder** om 'n sakrekenaar te gebruik.

$(6\frac{2}{3} + \frac{8}{15}) + 0,5 \times 10^3$ (8)

1.3 'n Motoris reis 2 880 km in 48 uur. Hoe lank sal dit hom neem om 120 000 m teen dieselfde gemiddelde spoed af te lê? (9)

[30]

VRAAG 2

2.1 Boekskuld van R15 800 op 'n insolvente boedel realiseer 65 sent in die Rand. Bereken die boekskuld wat gerealiseer het. (5)

2.2 Die bates van 'n insolvente boedel bestaan uit vaste eiendom wat teen R150 000 gewaardeer en verkoop is, kontant voorhande R2 700 en boekskuld wat R8 690 gerealiseer het.

Die insolvent (bankrot persoon) se totale laste is soos volg saamgestel:

• 'n Verband van R6 000 op die vaste eiendom
• Gewone krediteure waaraan R250 000 geskuld is
• Agterstallige huurgeld van R 2 390
• Sekwestrasiekoste van R3 000

Bereken die dividend wat aan die konkurrente skuldeisers betaalbaar is. (16)

2.3 Watter bedrag sal 'n krediteur met 'n eis van R10 400 ontvang in 'n insolvente boedel wat 45 c in die Rand uitbetaal? (4)

[25]

VRAAG 3

3.1 Indien die verkoopprys R544 is en die verkoper 25% wins op die verkoopprys maak, wat sal die persentasie wins of verlies op die kosprys wees? (10)

3.2 'n Groothandelaar koop 'n artikel van die vervaardiger vir R3 562,50. Hy beoog om 'n wins van 20% op die kosprys te maak nadat hy 'n 10% handelskorting, asook 'n verdere 5% korting vir kontant toegelaat het. Bereken die gemerkte prys van die artikel. (10)

3.3 'n Artikel is R1 280 gemerk en 'n 12½% korting word op die gemerkte prys toegestaan. Die verkoper maak 'n 25% wins op die verkoopprys. Wat is die kosprys van die artikel? (10)

[30]

b.o.

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

$$(6\tfrac{2}{3} + \tfrac{8}{15}) + 0,5 \times 10^3$$ (8)

1.3   A motorist travels 2 880 km in 48 hours. How long will it take him to travel 120 000 m at the same average speed?   (9)

[30]

QUESTION 2

2.1   Book debts of R15 800 of an insolvent estate realized 65 cents in the Rand. Calculate the book debts realized.   (5)

2.2   The assets of an insolvent estate consisted of fixed property valued and sold at R150 000, cash on hand R2 700 and book debts which realized R8 690.

The bankrupt's total liabilities were made up as follows:

- A bond of R6 000 existed on the fixed property
- Ordinary creditors were owed R250 000
- Rent in arrears was R2 390
- Sequestrated costs amounted to R3 000

Calculate the dividend payable to the concurrent creditors.   (16)

2.3   What amount would a creditor, with a claim of R10 400, receive in an insolvent estate paying 45 c in the Rand?   (4)

[25]

QUESTION 3

3.1   If the selling price is R544 and the seller makes a profit of 25% on the selling price, what will the percentage profit or loss on the cost price be?   (10)

3.2   A wholesaler buys an article from the manufacturer for R3 562,50. He intends to make a profit of 20% on cost after he allows a trade discount of 10% as well as a further discount of 5% for paying cash. Calculate the marked price of the article.   (10)

3.3   An article is marked at R1 280 and a discount of 12½% is allowed on the marked price. The seller makes a profit of 25% on the selling price. What is the cost price of the article?   (10)

[30]

VRAAG 4

4.1 'n Persoon belê 'n bedrag van R5 320 kontant in 12,5% aandele teen 133.
Bereken:

    4.1.1 Die nominale waarde van die aandele gekoop   (5)
    4.1.2 Die jaarlikse inkomste gemaak uit die aandele   (5)
    4.1.3 Die werklike inkomstepersentasie op die belegging   (5)

4.2 'n Persoon belê R6 000 in R2,50 aandele teen R3 per aandeel waarop 'n 15,5% dividend verklaar is. Bereken:

    4.2.1 Die getal R2,50 aandele wat gekoop is   (3)
    4.2.2 Die nominale waarde van hierdie aandele   (3)
    4.2.3 Die dividende wat op hierdie aandele ontvang is   (4)

4.3 'n Belegger ontvang 'n jaarlikse dividend van R1 785 op 8,5% aandele wat teen R125,00 aangekoop is. Bereken die nominale waarde van die aandele.   (5)

[30]

VRAAG 5

5.1 Bereken die oppervlakte van 'n reghoekige driehoek waarvan die een sy 60 cm lank en die hoogte 70 cm is.   (4)

5.2 Bepaal die koste daarvan om 'n driehoekige stuk grond van 8,7 m by 6,3 m by 6,0 m, teen 'n koste van R12,50/m^2 met gras te beplant.   (12)

5.3 'n Meetwiel maak 20 omwentelings in 'n sirkel met 'n oppervlak van 679,14 cm^2. Bepaal die omtrek van die meetwiel.   (14)

5.4 'n Ronde pyp wat 140 cm lank is, met 'n buite-diameter van 8 cm en 'n interne radius van 3 cm is van staal gemaak. Bepaal die volume van die ronde pyp se materiaal.   (10)

[40]

VRAAG 6

6.1 Wat sal die rente wees op R3 500 wat vir 146 dae teen 12½% enkelvoudige rente belê is?   (7)

6.2 Bereken die bedrag wat belê is, indien dit vanaf 5 April 2004 tot 17 Junie 2004 teen 20% per jaar belê is, en R2 080 sal lewer.   (7)

6.3 R5 000 is vir 2 jaar en 6 maande belê teen 13% per jaar saamgestelde rente, halfjaarliks saamgestel. Bereken die opgelope bedrag aan die einde van hierdie tydperk.   (8)

6.4 'n Bate van R60 000 is gedepresieer teen 25% per jaar op die afnemende-saldo-metode. Bereken die reswaarde van die bate na 5 jaar.   (8)

[30]

QUESTION 4

4.1   A person invests R5 320 cash in 12,5% stock at 133. Calculate:

      4.1.1 The nominal value of the stock purchased   (5)
      4.1.2 The annual income derived from stock   (5)
      4.1.3 The actual income percentage on the investment   (5)

4.2   A person invested R6 000 in R2,50 shares at R3 per share on which a dividend of 15,5% was declared. Calculate:

      4.2.1 The number of R2,50 shares bought   (3)
      4.2.2 The nominal value of these shares   (3)
      4.2.3 The dividends received on these shares   (4)

4.3   An investor received an annual dividend of R1 785 on 8,5% stock purchased at R125,00. Calculate the nominal value of the stock.   (5)

[30]

QUESTION 5

5.1   Calculate the area of a right-angled triangle, the one side of which is 60 cm and the height 70 cm.   (4)

5.2   Find the cost of planting grass on a triangular piece of ground 8,7 m by 6,3 m by 6,0 m at a cost of R12,50 /m^2.   (12)

5.3   A measuring wheel makes 20 revolutions in going round a circle with an area of 679,14 cm^2. Find the diameter of the measuring wheel.   (14)

5.4   A cylindrical pipe 140 cm long with an external diameter of 8 cm and an internal radius of 3 cm was made from metal. Find the volume of the cylindrical pipe material.   (10)

[40]

QUESTION 6

6.1   What will the interest be on R3 500, invested for 146 days at 12½% simple interest?   (7)

6.2   Calculate the amount which, if invested from 5 April 2004 to 17 June 2004 at 20% per annum simple interest, will amount to R2 080.   (7)

6.3   R5 000 was invested for 2 years and 6 months at 13% per annum compound interest, compounded half-yearly. Calculate the accumulated amount at the end of this period.   (8)

6.4   An asset of R60 000 was depreciated at 25% per annum using the diminishing balancing method. Calculate the residual value of the asset after 5 years.   (8)

[30]

VRAAG 7

7.1 Bereken die gemiddelde prys per 500 g indien 5 kg koffie teen R8,80 per kg met 8 kg koffie teen R27 per kg vermeng word. (5)

7.2 Verdeel R1 375 tussen **A,B** en **C** in die verhouding $\frac{1}{3}$: $\frac{1}{4}$: $\frac{1}{6}$. (6)

7.3 Op 1 Maart 2003 het **A** en **B** 'n besigheid begin met kapitaal van R6 000 en R4 000 onderskeidelik. **A** het 'n verdere R6 750 op 1 Julie 2003 belê, terwyl **B** R1 000 op 1 September 2003 onttrek het. Aan die einde van Februarie 2004 het die netto wins R34 220 bedra, waarvan R6 220 opsy gesit is 'n reserwefonds.

Die oorblywende winste is tussen **A** en **B** verdeel volgens die verhouding van die kapitaal wat belê is. Wat is **A** se gedeelte van die oorblywende wins? (14)
[25]

VRAAG 8

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

8.1 Bereken die jaarlikse paaiement om 'n lening van R500 000 teen 6% saamgestelde rente in 18 gelyke paaiemente af te los. (5)

8.2 Bereken die som wat aan die einde van elke jaar belê moet word teen 8% per jaar saamgestelde rente om 'n opbrengs van R60 000 na 15 jaar te lewer. (5)

8.3 Bereken die bedrag wat 'n persoon moet ontvang na tien jaar indien hy R30 000 teen 7% per jaar saamgestelde rente aan die begin van elke jaar belê. (8)

8.4 Watter som word benodig om 'n annuïteit van R1 500 teen 5% per jaar vir 10 jaar aan te koop indien die eerste paaiement onmiddellik betaalbaar is? (7)
[25]

VRAAG 9

9.1 Die jaarlikse eiendomsbelasting in 'n dorp is 2,75c per R op eiendom. Hoeveel sal 'n belastingbetaler per maand betaal indien die eiendom teen R70 000 gewaardeer word? (5)

9.2 Die wisselkoers is op 'n betrokke dag soos volg:

VSA   en   RSA   : $1   =   R8,0356
Londen   en   VSA   :   £1   = $1,6703
Londen   en   RSA   :   £1   =   R13,4217

Bereken die bedrag wat 'n handelaar in die RSA sal benodig om 'n rekening van $9 000 via Londen te kan vereffen. (6)

QUESTION 7

7.1 Calculate the average price per 500 g if 5 kg coffee at R8,80 per kg is mixed with 8 kg of coffee at R27 per kg. (5)

7.2 Divide R1 375 among **A**, **B** and **C** in the ratio $\frac{1}{3} : \frac{1}{4} : \frac{1}{6}$. (6)

7.3 **A** and **B** started a business on 1 March 2003 with R6 000 and R4 000 respectively as capital. **A** invested a further R6 750 on 1 July 2003 while **B** withdrew R1 000 on 1 September 2003. At the end of February 2004 the net profit amounted to R34 220, of which R6 220 was set aside as a reserve.

The remaining profits were divided between **A** and **B** according to the ratio of capital invested. What is **A**'s share of the remaining profit? (14)
[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 R500 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 R60 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 10 years if the person invests R30 000 at the beginning of each year at 7% per annum compound interest. (8)

8.4 What sum is required to buy an annuity of R1 500 for 10 years at 5% per annum, if the first instalment is paid immediately? (7)
[25]

QUESTION 9

9.1 The annual property rate in a town is 2,75c per R on land. How much will a ratepayer pay per month if the plot is valued at R70 000? (5)

9.2 The exchange rate on a certain day was as follows:

USA	and	RSA	:	$1	=	R8,0356
London	and	USA	:	£1	=	$1,6703
London	and	RSA	:	£1	=	R13,4217

Calculate the amount a trader in the RSA will require to settle an amount of $9 000 via London. (6)

9.3 Goedere word teen R80 000 gewaardeer. Die versekeringspremie is 45 sent per sent. Bereken die premie betaalbaar indien die polis ook die premie dek. (7)

9.4 Die Munisipaliteit se tarieweskaal is soos volg:

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

Hoeveel moet 'n verbruiker vir elektrisiteit en vir water betaal indien hy/sy 1 048 kW elektrisiteit en 65 kl water gebruik het? (Ignoreer BTW.) (7)
[25]

VRAAG 10

Die volgende tabel vergelyk die enkelvoudige rente op R100 teen 5% per jaar en saamgestelde rente op R100 teen 5% per jaar vir 'n tydperk van 35 jaar.

Jaar	0	2	5	10	15	20	24	30	35
Enkelvoudige rente in R	0	10	25	50	75	100	125	150	175
Saamgestelde rente tot die naaste R	0	28	63	63	108	165	239	333	425

10.1 Stel die inligting hierbo grafies voor. (Gebruik die grafiekpapier wat verskaf word.)

Gebruik die skaal:
Horisontale as : 2 cm verteenwoordig 5 jaar
Vertikale as : 2 cm verteenwoordig R50 (25)

10.2 10.2.1 Wat is die enkelvoudige rente en saamgestelde rente op R100 teen 5% p.j. na 25 jaar? (6)

10.2.2 Hoeveel jaar sal dit neem vir 'n hoofsom van R100 om tot R400 te groei teen 5% p.j. saamgestelde rente? (3)

10.2.3 Wat is die verskil tussen saamgestelde rente en enkelvoudige rente op R300 teen 5% p.j. na 27 jaar? (6)
[40]

TOTAAL: 300

9.3 Goods are valued at R80 000. The insurance premium is 45 cents per cent. Calculate the premium payable if the policy also covers the premium. (7)

9.4 The municipality's scale of fees is as follows:

	First 6 kl	Free
Water supply (domestic) per kl	6 to 10 kl	R2,15
	10 to 20 kl	R3,25
	20 to 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 1 048 kW electricity and 65 kl of water? (Ignore VAT.) (7)

[25]

QUESTION 10

The following table compares the simple interest on R100 at 5% p.a. and compound interest on R100 at 5% p.a. respectively for a period of 35 years.

Year	0	2	5	10	15	20	24	30	35
Simple Interest in R	0	10	25	50	75	100	125	150	175
Compound Interest to the nearest Rand	0	28	63	63	108	165	239	333	425

10.1 Represent the information in the above table graphically. (Use the graph paper that has been provided.)

Use the scale:
Horizontal Axis : 2 cm represent 5 years
Vertical Axis : 2 cm represent R50 (25)

10.2 10.2.1 What is the simple interest and compound interest on R100 at 5% p.a. after 25 years? (6)

10.2.2 How many years would it take for a principal of R100 to amount to R400 at 5% p.a. compound interest? (3)

10.2.3 What is the difference between compound interest and simple interest on R300 at 5% p.a. after 27 years? (6)

[40]

TOTAL: 300

INFORMATION SHEET / *INLIGTINGSBLAD*

1.   MENSURATION / *METING*

1.1   Right-angled triangle: / *Reghoekige driehoek:*
Area = ½ base x height / *Area = ½ 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 = ½ (a + b + c) /
$A = \sqrt{s(s-a)(s-b)(s-c)}$ *waar s = ½ (a + b + c)*

1.3   Circle: / *Sirkel*
Circumference (c) = 2π r / *Omtrek (c) = 2π r*
Area of Circle: A = π r^2 / *Area van Sirkel : A = π 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 = Area of base x height = π r^{2}h / *V = Area van basis x hoogte = π r^{2}h*
Cylindrical pipe / *Silindriese pyp*
Volume of pipe(material): / *Volume van pyp(materiaal):*
V = π R^{2}h – π r^{2}h where R is the external radius and r is the internal radius /
V = π R^{2}h – π r^{2}h waar R die eksterne radius en r die interne radius is
= π h (R-r)(R+r) /   = π h (R-r)(R+r)

1.6   Sphere: / *Sfeer*
Area of sphere: / *Area van sfeer:*
A = 4 π r^2 / *A = 4 π r^2*
Volume of sphere: / *Volume van sfeer:*
V = ⅘ π r^3 / *V = ⅘ π r^3*

2.   SIMPLE INTEREST / *ENKELVOUDIGE RENTE*

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

P = Principal / *Kapitaal*
R = Rate per cent per annum / Koers per sent per annum
T = Time / Tyd

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

P.T.O. / *b.o.*

3.　COMPOUND INTEREST / *SAAMGESTELDE RENTE*

$$A = P\left(1 + \frac{r}{100}\right)^n$$ 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:*

$$P = \frac{Vp}{V-p}$$ 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:*

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

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

Amount of R1 per annum at the end of the period

$S_{\overline{n}|}$

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

$a_{\overline{n}|}$

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	8.7455	8,2444	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.*

END / *EINDE*