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Province of the EASTERN CAPE EDUCATION

NATIONAL SENIOR CERTIFICATE *NASIONALE SENIORSERTIFIKAAT*

GRADE/*GRAAD* 11

NOVEMBER 2024

MATHEMATICS P1 / *WISKUNDE V1* MARKING GUIDELINE / *NASIENRIGLYN*

MARKS/*PUNTE*: **150**

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This marking guideline consists of 16 pages.
Hierdie nasienriglyn bestaan uit 16 *bladsye*.

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NOTE/*NOTA*:

- If a candidate answered a question TWICE, mark the FIRST attempt ONLY.
  Indien 'n kandidaat 'n vraag TWEE keer beantwoord het, merk SLEGS die EERSTE poging.
- Consistent accuracy (CA) applies in ALL aspects of the marking guideline.
  Volgehoue akkuraatheid geld deurgaans in ALLE aspekte van die nasienriglyn.
- If a candidate crossed out an attempt of a question and did not redo the question, mark the crossed-out attempt.
  Indien 'n kandidaat 'n poging vir 'n vraag deurgetrek het en nie die vraag weer beantwoord het nie, merk die poging wat deurgetrek is.
- The mark for substitution is awarded for substitution into the correct formula.
  Die punt vir vervanging word toegeken vir vervanging in die korrekte formule.

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QUESTION 1/*VRAAG 1*

1.1.1

$x^2 - 2x - 8 = 0$

$(x-4)(x+2) = 0$

$x - 4 = 0$ or/*of* $x + 2 = 0$

$x = 4$ or/*of* $x = -2$

Answers only – Full Marks
Slegs antwoorde – Volpunte

✓ $x = -4$
✓ $x = -2$ (2)

1.1.2

$2x^2 - 3x - 7 = 0$

$x = \dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

$x = \dfrac{-(-3) \pm \sqrt{(-3)^2 - 4(2)(-7)}}{2(2)}$

$\therefore x = 2{,}77$ or / *of* $x = -1{,}27$

Penalise 1 mark for incorrect rounding off./ *Penaliseer 1 punt vir verkeerde afronding.*

✓ standard form / *standaardvorm*
✓ substitution / *vervanging*
✓✓ x-values / x-*waardes* (4)

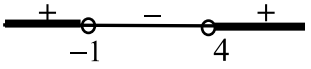
1.1.3

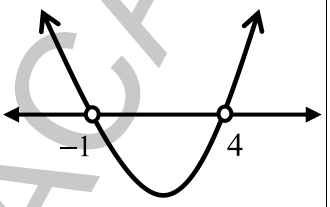
$(x+1)(4-x) > 0$

$(x+1)(x-4) < 0$

critical values/*kritieke waardes*

$x = -1$ or/*of* $x = 4$





$-1 < x < 4$, but/*maar* $x \in \mathbb{N}$

$\therefore x \in \{1;2;3\}$

✓ critical values / *kritieke waardes*
✓ $-1 < x < 4$, but/*maar* $x \in \mathbb{N}$
✓ $\therefore x \in \{1;2;3\}$

OR/*OF*

$x \in (-1;4)$, but/*maar* $x \in \mathbb{N}$

$\therefore x = 1$ or/*of* $x = 2$ or/*of* $x = 3$

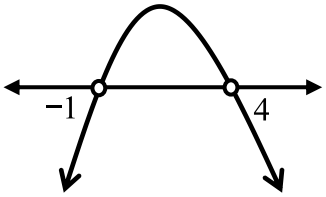
✓ critical values / *kritieke waardes*
✓ $x \in (-1;4)$, but/*maar* $x \in \mathbb{N}$
✓ $\therefore x = 1$ or/*of* $x = 2$ or/*of* $x = 3$

OR/*OF*

$(x+1)(4-x) > 0$

critical values/*kritieke waardes*

$x = -1$ or/*of* $x = 4$



$-1 < x < 4$, but/*maar* $x \in \mathbb{N}$

$\therefore x \in \{1;2;3\}$

OR/*OF*

✓ critical values / *kritieke waardes*
✓ $-1 < x < 4$, but/*maar* $x \in \mathbb{N}$
✓ $\therefore x \in \{1;2;3\}$ (3)

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1.2	1.2.1	$\frac{14}{p} = p+5$ $p(p+5) = 14$ $p^2+5p-14=0$ $(p+7)(p-2)=0$ $p=-7$ *or / of* $p=2$	✓ multiplying by LCD *vermeningvuldig met KGD* ✓ factors / *faktore* ✓ answer / *antwoord* (3)
	1.2.2	$\frac{14}{\sqrt{x+5}} = \sqrt{x+5}+5$ Let/*Laat* $\sqrt{x+5} = p$ $2=\sqrt{x+5}$ or / *of* $-7=\sqrt{x+5}$ But/*Maar* $-7 \neq \sqrt{x+5}$ $x+5=(2)^2$ $x=4-5$ $x=-1$	✓ $2=\sqrt{x+5}$ or / *of* $-7=\sqrt{x+5}$ ✓ $-7 \neq \sqrt{x+5}$ ✓ square both sides / *kwadreer beide kante* ✓ *x*-value/*x-waarde* (4)
1.3	$-3y=1-x$ .....(1) $x^2-2xy-y^2-7=0$ ....(2) From / *Vanaf* (1): $x=1+3y$ .....(3) (3) into/*in* (2): $(1+3y)^2-2y(1+3y)-y^2-7=0$ $1+6y+9y^2-2y-6y^2-y^2-7=0$ $2y^2-4y-6=0$ $y^2-2y-3=0$ $(y-3)(y+1)=0$ $y=3$ or/*of* $y=-1$ $x=10$ or/*of* $x=-2$	✓ $x=1+3y$ ✓ substitution / *vervanging* ✓ standard form / *standaardvorm* ✓ factors / *faktore* ✓ *y*-values / *y-waardes* ✓ *x*-values / *x-waardes* (6)

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1.4	$\frac{2}{x}+\frac{1}{x^2}=3$ $2x+1-3x^2=0$ $3x^2-2x-1=0$ $(3x+1)(x-1)=0$ $x=-\frac{1}{3}$ or / *of* $x=1$ but / *maar* $x<0$ $\therefore x=-\frac{1}{3}$ $2(6x-1)^{-1}$ $=\frac{2}{6x-1}$ $=\frac{2}{6\left(-\frac{1}{3}\right)-1}$ $=\frac{2}{-2-1}$ $=-\frac{2}{3}$	✓ multiplying by LCD *vermenigvuldig met KGD* ✓ *x*-value / *x-waarde* ✓ substitution / *vervanging* ✓ answer / *antwoord* (4)
		[26]

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QUESTION 2/*VRAAG 2*

2.1

$$\frac{\sqrt{32}-\sqrt{18}+3\sqrt{3}}{\sqrt{108}+\sqrt{8}}$$
$$=\frac{\sqrt{16\times 2}-\sqrt{9\times 2}+3\sqrt{3}}{\sqrt{36\times 3}+\sqrt{4\times 2}}$$
$$=\frac{4\sqrt{2}-3\sqrt{2}+3\sqrt{3}}{6\sqrt{3}+2\sqrt{2}}$$
$$=\frac{3\sqrt{3}+\sqrt{2}}{6\sqrt{3}+2\sqrt{2}}$$
$$=\frac{3\sqrt{3}+\sqrt{2}}{2\left(3\sqrt{3}+\sqrt{2}\right)}$$
$$=\frac{1}{2}$$

✓ factors of 32 , 18 , 108 and 8 (square number and prime factor)
faktore van 32, 18, 108 *en* 8 (*vierkantgetal en priemgetal*)

✓ $\frac{4\sqrt{2}-3\sqrt{2}+3\sqrt{3}}{6\sqrt{3}+2\sqrt{2}}$

✓ $\frac{3\sqrt{3}+\sqrt{2}}{2\left(3\sqrt{3}+\sqrt{2}\right)}$

✓ answer / *antwoord* (4)

2.2 2.2.1

$$2x^{\frac{-5}{2}}=64$$
$$x^{\frac{-5}{2}}=32$$
$$x=\left(2^5\right)^{\frac{2}{-5}}$$
$$x=2^{-2}$$
$$x=\frac{1}{2^2}$$
$$x=\frac{1}{4}$$

✓ dividing by 2 /*deel deur 2*

✓ raising by the reciprocal of $-\frac{5}{2}$
tot die mag van omgekeerde van $-\frac{5}{2}$

✓ answer / *Antwoord* (3)

2.2.2

$$3.5^x-5^{x-1}=14$$
$$3.5^x-5^x.5^{-1}=14$$
$$5^x\left(3-\frac{1}{5}\right)=14$$
$$5^x.\frac{14}{5}=14$$
$$5^x=14\times\frac{5}{14}$$
$$5^x=5$$
$$\therefore x=1$$

✓ reversing the law / *die omkeer van die wet* $a^m\times a^n=a^{m+n}$
application of / *toepassing van* $a^{m+n}=a^m\times a^n$
✓ common factor / *gemene faktor*
✓ simplification / *vereenvoudiging*

✓ $5^x=5$

✓ answer / *antwoord* (5)

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2.3	$\sqrt{a}+\sqrt{b}=\sqrt{9+\sqrt{56}}$ $\left(\sqrt{a}+\sqrt{b}\right)^2=\left(\sqrt{9+\sqrt{56}}\right)^2$ $a+b+2\sqrt{ab}=9+\sqrt{2\times14}$ $a+b+2\sqrt{ab}=9+2\sqrt{14}$ but / *maar*, $\sqrt{56}=2\sqrt{14}$ $\therefore a+b=9$ and / *en* $2\sqrt{ab}=2\sqrt{14}\Rightarrow ab=14$ by inspection / *deur inspeksie*: $a=2$ or / *of* $b=7$ $\therefore a^2+b^2=(2)^2+(7)^2$ $=53$	✓ squaring both sides *kwadreer albei kante* ✓ $\sqrt{56}=2\sqrt{14}$ ✓ $a+b=9$ and/*en* $2\sqrt{ab}=2\sqrt{14}$ ✓ $a=2$ or / *of* $b=7$ ✓ $a^2+b^2=53$
	OR/*OF*	**OR/*OF***
	$\sqrt{a}+\sqrt{b}=\sqrt{9+\sqrt{56}}$ $\left(\sqrt{a}+\sqrt{b}\right)^2=\left(\sqrt{9+\sqrt{56}}\right)^2$ $a+b+2\sqrt{ab}=9+\sqrt{2\times14}$ $a+b+2\sqrt{ab}=9+2\sqrt{14}$ but / *maar*, $\sqrt{56}=2\sqrt{14}$ $\therefore a+b=9$ and / *en* $2\sqrt{ab}=2\sqrt{14}\Rightarrow ab=14$ $a=9-b$.....(1) $ab=14$.....(2) $b(9-b)=14$ $9b-b^2-14=0$ $b^2-9b+14=0$ $(b-2)(b-7)=0$ $b=2$ or / *of* $b=7$ for / *vir* $b=2: a=7$ for / *vir* $b=7: a=2$ $\therefore a^2+b^2=53$	✓ squaring both sides *kwadreer albei kante* ✓ $\sqrt{56}=2\sqrt{14}$ ✓ $a+b=9$ and/*en* $2\sqrt{ab}=2\sqrt{14}$ ✓ $a=2$ or / *of* $b=7$ ✓ $a^2+b^2=53$ (5)
		[17]

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QUESTION 3/*VRAAG 3*			
3.1	3.1.1	$-5;\ -9;\ -13;\ \ldots$ $-17;\ -21$	✓ -17 ✓ -21 (2)
	3.1.2	$T_n = dn + c \qquad d = -4$ $T_n = -4n + c$ Subst./ *Verv.* $(T_1 = -5)$ $-5 = -4(1) + c$ $\therefore c = -1$ $T_n = -4n - 1$	✓ $d = -4$ ✓ $c = -1$ (2)
	3.1.3	$-141 = -4n - 1$ $-140 = -4n$ $\therefore n = 35$	✓ equating / *gelykstel* ✓ value of n / *waarde van n* (2)
3.2	$T_1 = x$ $d = x - 5$ Sequence / *Ry* : $x;\ x + (x - 5);\ x + 2(x - 5)$ Equation / *Vergelyking* : $x + x + (x - 5) + x + 2(x - 5) = 63$ $4x - 5 + 2x - 10 = 63$ $6x = 78$ $x = 13$		✓ $x - 5$ ✓ T_2 & T_3 ✓ equating to 63 / *stel gelyk aan* 63 ✓ simplification / *vereenvoudiging* ✓ value of x / *waarde van x* (5)
			[11]

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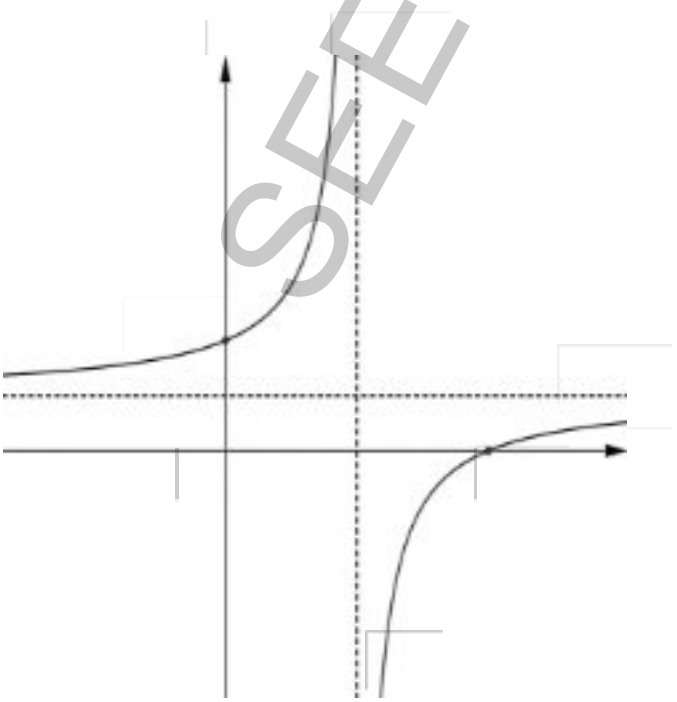
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QUESTION 4/*VRAAG 4*		
4.1	**24 ; 10 ; 0 ; – 6** **– 14 ; – 10 ; – 6** **4 ; 4**	✓ first difference / *eerste verskil* ✓ second difference / *tweede verskil* (2)
4.2	$2a=4$ $a=2$ $3(2)+b=-14$ $b=-14-3(2)$ $b=-20$ $a+b+c=24$ $c=24-2+20$ $c=42$ $T_n=2n^2-20n+42$	✓ $a=6$ ✓ $b=-9$ ✓ $c=6$ ✓ $T_n=2n^2-20n+42$ (4)
4.3	$T_{52}=2(52)^2-20(52)+42$ $=4410$	✓ substitution / *vervanging* ✓ answer / *antwoord* (2)
4.4	$T_n=2n^2-20n+42$ $n=\frac{-b}{2a}$ $n=\frac{-(-20)}{2(2)}=5$ $T_5=2(5)^2-20(5)+42$ $=-8$ Therefore, the smallest value of the sequence is -8 *Daarom is die kleinste waarde van die ry* -8 **OR / *OF*** $T_n=2n^2-20n+42$ $T_n=2(n^2-10n+21)$ $T_n=2(n^2-10n+(-5)^2-(-5)^2+21)$ $T_n=2((n-5)^2-4)$ $T_n=2(n-5)^2-8$ Therefore, the smallest value of the sequence is -8 *Daarom is die kleinste waarde van die ry* -8	✓ value of n / *waarde van n* ✓ substitution / *vervanging* ✓ answer / *antwoord* **OR / *OF*** ✓ common factor *gemene faktor* ✓ completing the square *voltooiing van die vierkant* ✓ answer / *antwoord* (3)
4.5	$T_n=2n^2-20n+42$ $2n^2-20n+42>0$ $n^2-10n+21>0$ $(n-7)(n-3)>0$ $c.v's\{3;7\}$ $\therefore 1\le n<3 \text{ or/}of\ n>7, n\in\mathbb{N}$ Accept/*Aanvaar*: $1\le n\le 3 or n\ge 7, n\in\mathbb{N}$	✓ $T_n>0$ ✓ factors / *faktore* ✓ $1\le n<3$ or / *of* $n>7$ ✓ $n\in\mathbb{N}$ (4)
		[15]

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QUESTION 5/*VRAAG 5*		
5.1	$x-2=-x+4$ $2x=6$ $x=3$ $x-3=0$ $\therefore p=-3$ $y=x-2$ $=(3)-2$ $=1$ $\therefore q=1$ **OR/ *OF*** $y=-x+4$ $=-(3)+4$ $=1$ $q=1$	✓ equating / *gelyk stel* ✓ $x-3=0$ ✓ substituting x / vervang x ✓ $y=1$ (4)
5.2	$x-\text{int}$ / $x-afsnit:(y=0)$ $\frac{-3}{x-3}+1=0$ $\frac{-3}{x-3}=-1$ $-x+3=-3$ $x=6$	✓ Letting / *Laat* $y=0$ ✓ $x=6$ (2)
5.3	$y-\text{int}$ / $y-afsnit:(x=0)$ $y=\frac{-3}{0-3}+1$ $y=2$	✓ Letting / *Laat* $x=0$ ✓ $y=2$ (2)
5.4		✓ shape / *vorm* ✓ asymptotes / *asimptote* ✓ intercepts / *afsnitte* (3)

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5.5	Vertical asymptote of g (by inspection) : $x = -3$ *Vertikale asimptoot van g (deur inspeksie)* $\therefore x \in \mathbb{R}; x \neq -3$ **OR/*OF*** $f(x) = \frac{-3}{x-3} + 1$ $x = 0 \Rightarrow y$-axis /*y-as* $g(x) = f(-x) = \frac{-3}{-x-3} + 1$ $-x - 3 = 0$ $x = -3$ $\therefore x \in \mathbb{R}; x \neq -3$	✓ vertical asymptote *vertikale asimptoot* ✓✓ $x \in \mathbb{R}; x \neq -3$ **OR/*OF*** ✓ vertical asymptote *vertikale asimptoot* ✓✓ $x \in \mathbb{R}; x \neq -3$ (3)
5.6	$x \leq 0$ or / *of* $3 < x \leq 6$	✓ $x \leq 0$ ✓✓ $3 < x \leq 6$ (3)
		[17]

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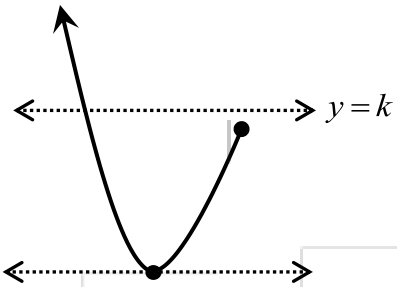
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QUESTION 6/*VRAAG 6*		
6.1	$f(x)=x^2-4x-5$ $f(6)=(6)^2-4(6)-5$ $=7$	✓ answer / *antwoord* (1)
6.2	$x^2-4x-5=0$ $(x-5)(x+1)=0$ $x=5$ or / *of* $x=-1$ $\therefore$ A$(-1;0)$ B$(5;0)$	✓ factors / *faktore* ✓ coordinates of A / *koördinate van* A ✓ coordinates of B / *koördinate van* B (3)
6.3	AB $=x_B-x_A$ $=5-(-1)=6$ units / *eenhede*	✓ answer / *antwoord* (1)
6.4	$g(x)=(x-2)^2-4(x-2)-5+5$ $=x^2-4x+4-4x+8-5+5$ $=x^2-8x-12$	✓ $(x-2)$ ✓ $+5$ ✓ answer / *antwoord* (3)
6.5	$h(x)=-2x+c$ $f(x)=x^2-4x-5$ $x^2-4x-5=-2x+c$ $x^2-2x-5-c=0$ $\Delta=b^2-4ac$ $=(-2)^2-4(1)(-5-c)$ $=4-4(-5-c)$ $=4+20+4c$ $=24+4c$ Tangent $\Rightarrow$ one solution / *Raaklyn* $\Rightarrow$ *een oplossing* $\therefore \Delta=0$ $24+4c=0$ $4c=-24$ $c=-6$ Therefore, y-int $=-6$ / *Daarom, y-afsnit* $=-6$	✓ $f(x)=g(x)$ ✓ simplification / *vereenvoudiging* ✓ $\Delta=24+4c$ ✓ $\Delta=0$ ✓ $c=-6$ (5)

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6.6	$f(x)=k$ $x=\frac{-b}{2a}$ $=-\frac{-(-4)}{2(1)}$ $=2$ $f(2)=-9$  $k=-9$ or / *of* $k>7$	✓ $f(2)=-9$ ✓✓ $k=-9$ or / *of* $k>7$ (3)
		[16]

QUESTION 7/*VRAAG 7*

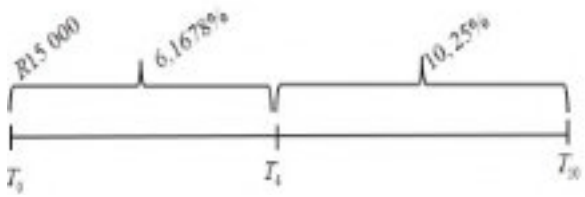
7.1	$B(0;7)$	✓ answer / *antwoord* (1)
7.2	$f(x)=-b^x+8$ subst. / *verv.*: $(-2;4)$ $4=-b^{-2}+8$ $b^{-2}=4$ $\frac{1}{b^2}=4$ $b^2=\frac{1}{4}$ $b=\pm\sqrt{\frac{1}{4}}$ $\therefore b=\frac{1}{2}$; $b>0$	✓ substitution of $(-2;4)$ *vervanging van* $(-2;4)$ ✓ $b=\pm\sqrt{\frac{1}{4}}$ (2)
7.3	Average gradient / *Gemiddelde gradiënt* $=\frac{3}{2}$	✓✓ $\frac{3}{2}$ (2)
7.4	$y=8$	✓ answer / *antwoord* (1)

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7.5	$f(-1)=-\left(\frac{1}{2}\right)^{-1}+8=6$ $g(-1)=\frac{3}{2}(-1)+7=\frac{11}{2}$ $f(-1)-g(-1)=6-\frac{11}{2}$ $=\frac{1}{2}$ unit/*eenheid*	✓ $f(-1)=6$ ✓ $g(-1)=\frac{11}{2}$ ✓ $f(-1)-g(-1)=\frac{1}{2}$ (3)
7.6	- Reflection along x-axis / *Refleksie langs die x-as* $-f(x)=\left(\frac{1}{2}\right)^{x}-8$ - then, vertical translation by 3 units upwards *dan, vertikale translasie van 3 eenhede opwaarts* $h(x)=\left(\frac{1}{2}\right)^{x}-8+3$ $=\left(\frac{1}{2}\right)^{x}-5$	✓ Reflection along x-axis *Refleksie langs die x-as* ✓ 3 units upwards *3 eenhede opwaarts* (2)
7.7	$-2\le x\le 0$ or / *of* $x\in[-2;0]$	✓✓ answer / *antwoord* (2)
		[13]

QUESTION 8/*VRAAG 8*

8.1	$A=P(1-i)^{n}$ $=14\,500(1-0,13)^{5}$ $=R7\ 227,10$		✓ $i=0,13$ ✓ substitution into the correct formula *vervanging in die korrekte formule* ✓ answer / *antwoord* (3)
8.2	8.2.1	$i_{eff}=\left(1+\frac{0,06}{12}\right)^{12}-1$ $=6,1678\%$ $i_{eff}=\left(1+\frac{0,1}{2}\right)^{2}-1$ $=10,25\%$	✓ $i_{eff}=\left(1+\frac{0,06}{12}\right)^{12}-1$ ✓ $6,1678\%$ ✓ $i_{eff}=\left(1+\frac{0,1}{2}\right)^{2}-1$ ✓ $10,25\%$ (4)
	8.2.2	 $A=15\,000\left(1+\frac{6,1678}{100}\right)^{4}(1+0,1025)^{6}$ $=R34\ 224,26$	✓ $15\,000\left(1+\frac{6,1678}{100}\right)^{4}$ ✓ $\times(1+0,1025)^{6}$ ✓ $n=4$ and / *en* $n=6$ ✓ answer / *antwoord* (4)

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	8.2.3	$15\,000\left(1+\frac{0,06}{12}\right)^{48}\left(1+\frac{x}{4}\right)^{8}\left(1+\frac{x}{2}\right)^{8}=48\,897,03$ $\left[\left(1+\frac{x}{4}\right)\left(1+\frac{x}{2}\right)\right]^{8}=2,565784627$ $1+\frac{x}{2}+\frac{x}{4}+\frac{x^2}{8}=1,125$ $8+4x+2x+x^2=9$ $x^2+6x-1=0$ $x=\frac{-(6)\pm\sqrt{(6)^2-4(1)(-1)}}{2(1)}$ $x=0,1623$ or/*of* $x\neq -6,1623$ $\therefore$ Interest rate/*Rentekoers* $=16,23\%$	✓ $15000\left(1+\frac{6\%}{12}\right)^{48}\left(1+\frac{x}{4}\right)^{8}\left(1+\frac{x}{2}\right)^{8}=48897,03$ ✓ $\left[\left(1+\frac{x}{4}\right)\left(1+\frac{x}{2}\right)\right]^{8}=2,565784627$ ✓ multiplying by the LCD / *vermenigvuldig met KGD* ✓ standard form / *standaardvorm* ✓ answer / *antwoord* (5)
			[16]

QUESTION 9/*VRAAG 9*

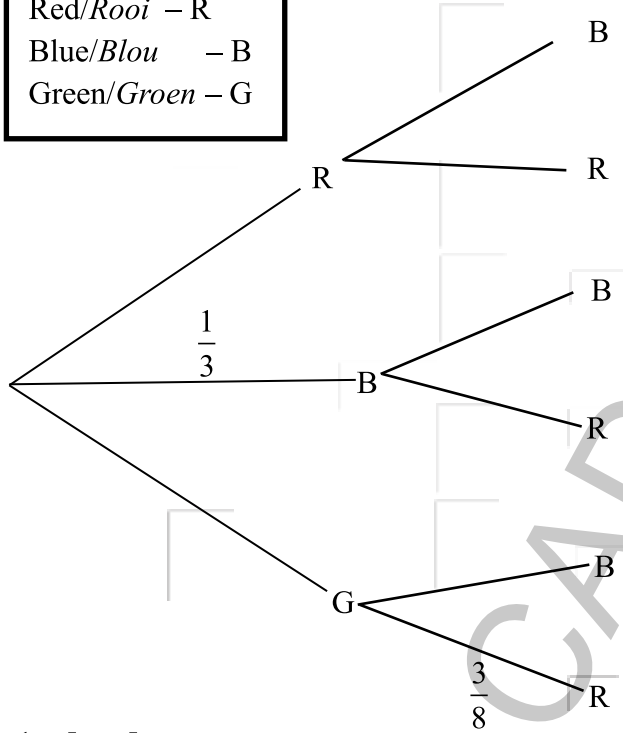
9.1	9.1.1	At least detected by one camera $\Rightarrow A$ *or* B *Ten minste deur een kamera opgespoor* $\Rightarrow A$ *of* B $P(A\,or/of\,B)=P(A)+P(B)-P(A\,and/en\,B)$ $=0,5+0,6-(0,5\times 0,6)$ $=0,8$	✓ $0,5\times 0,6$ ✓ substitution into the correct formula *vervanging in die korrekte formule* ✓ answer / *antwoord* (3)
	9.1.2	P(Not detected) = 1 − (at least detected by one) P(*Nie opgespoor*) = 1 − (*ten minste deur een opgespoor*) $=1-0,8$ $=0,2$	✓ $1-0,8$ ✓ answer / *antwoord* (2)
9.2	9.2.1	$x=110-(26+9+12+4+24+15+12)$ $=8$	✓✓ $110-(26+9+12+4+24+15+12)$ (2)
	9.2.2	$\frac{26+24+15}{110}$ $=\frac{65}{110}\approx 0,59$	✓ 65 ✓ $\frac{65}{110}$ or/*of* $\frac{13}{22}$ or/*of* $0,59$ (2)
	9.2.3	$\frac{12}{110}$ $\frac{6}{55}\approx 0,12$	✓ 12 ✓ $\frac{6}{55}$ or/*of* $0,12$ (2)
			[11]

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QUESTION 10/*VRAAG 10*

Let / *Laat*
Red/*Rooi* – R
Blue/*Blou* – B
Green/*Groen* – G



✓✓ branches/*takke*

(R ; B)

✓ probabilities/*waarskynlikhede*

(R; R)

✓ outcomes/*uikomste*

(B ; B)

(B ; R)

(R ; B)

(G ; R)

$\frac{1}{3}\times\frac{5}{8}=\frac{5}{24}$

$\frac{1}{3}\times\frac{3}{8}=\frac{1}{8}$

$\therefore \frac{5}{24}+\frac{1}{8}=\frac{1}{3}$

✓ $\frac{5}{24}$

✓ $\frac{1}{8}$

$P(\text{same colour / } \textit{dieselfde kleur})$

$=\frac{1}{3}$ or / *of* $\approx 0,33$

✓ answer / *antwoord*

(8)

Alternative Marking / *Alternatiewe Nasien*

✓ $\frac{1}{3}$ ✓ $\frac{5}{8}$ ✓ $\frac{5}{24}$

✓ addition / *optelling*

✓ $\frac{1}{3}$ ✓ $\frac{3}{8}$ ✓ $\frac{1}{8}$

✓ answer / *antwoord*

[8]

TOTAL / *TOTAAL:* 150

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