Sport Q&A W1

NOTE:
- If a candidate answered a question TWICE, mark only the FIRST attempt.
- If a candidate crossed out an answer and did not redo it, mark the crossed-out answer.
- Consistent accuracy applies to ALL aspects of the marking memorandum(If a learner makes a mistake, the mistake has to be follwed up. Stop marking the question if the learner commits the second mistake)
- It is unacceptable to assume values/answers in order to solve a problem.
- Penalise once for incorrect rounding off.

LET WEL:
- *As 'n kandidaat 'n vraag TWEE keer beantwoord het, sien slegs die EERSTE poging na.*
- *As 'n kandidaat 'n antwoord deurgehaal en nie oorgedoen het nie, sien die deurgehaalde antwoord na.*
- *Volgehoue akkuraatheid is op ALLE aspekte van die memorandum van toepassing(as 'n leerder 'n fout gemaak het, moet die fout opgevolg word. Hou op om die vraag na te sien as die leerder 'n tweede fout maak)*
- *Dit is onaanvaarbaar om waardes/antwoorde te veronderstel om 'n probleem op te los.*
- *Penaliseer een keer vir inkorrekte afronding*

QUESTION/*VRAAG* 1

1.1.1	$3x^2-5x-1=0$ $x=\frac{-b\pm\sqrt{b^2-4ac}}{2a}$ $=\frac{-(-5)\pm\sqrt{(-5)^2-4(3)(-1)}}{2(3)}$ $=\frac{5\pm\sqrt{37}}{6}$ $x=1{,}85$ or $x=-0{,}18$ Incorrect rounding off, max $\frac{2}{3}$ marks	✓substitution in the correct quadratic formula */vervanging in die korrekte formule* ✓answer/*antwoord* ✓answer/*antwoord* (3)
1.1.2	$x^2-6x+8=0$ $(x-4)(x-2)=0$ $x=4$ or $x=2$	✓ factors/*faktore* *OR* Substitution in the correct quadratic formula/ *vervanging in die korrekte kwadratiese formule* ✓$x=4$ ✓$x=2$ (3)

DM

Please turn over/*Blaai om asseblief*

basic education
Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE/ *NASIONALE SENIOR SERTIFIKAAT*

GRADE/*GRAAD* 11

MATHEMATICS P1/*WISKUNDE V1*

NOVEMBER 2016

MEMORANDUM

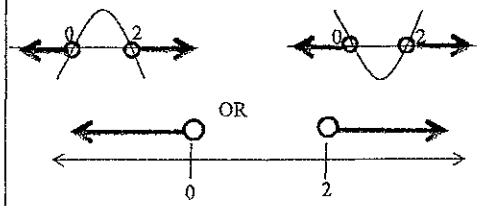
MARKS/*PUNTE*: 150

This memorandum consists of 18 pages.
Hierdie memorandum bestaan uit 18 bladsye.

DEPARTMENT OF BASIC EDUCATION
PRIVATE BAG X895, PRETORIA 0001
2016 -11- 11
APPROVED MARKING GUIDELINE
PUBLIC EXAMINATION

12/11/2016

Please turn over/*Blaai om asseblief*

1.1.3	Option/*Opsie* 1 **OR/*OF*** Option/*Opsie* 2 $4x-2x^2<0$ $4x-2x^2<0$ $2x(2-x)<0$ $-2x^2+4x<0$ $x<0$ *or* $x>2$ $2x^2-4x>0$ $x(2x-4)>0$ $x<0$ or $x>2$  	✓factors/*faktore* ✓ method/*metode* ✓✓$x<0$ or $x>2$ Maximum $\frac{3}{4}$ for incorrect notation Maksimum $\frac{3}{4}$ vir verkeerde notasie (4)

D. M

1.1.4	$2^{3x+1}+2^{3x}=12$ $2^{3x}\left[2^1+1\right]=12$ $2^{3x}.3=12$ $2^{3x}=4$ $2^{3x}=2^2$ $3x=2$ $\therefore x=\frac{2}{3}$	✓common/*gemene* factor ✓ simplification/*vereenv.* ✓ equating/*gelykst* exponents ✓answer/*antw.* (4)
1.1.5	$\sqrt{x-1}+3=x-4$ $\sqrt{x-1}=x-4-3$ $x-1=(x-7)^2$ $x-1=x^2-14x+49$ $x^2-15x+50=0$ $(x-5)(x-10)=0$ $x\neq 5$ or $x=10$	✓isolate/*isoleer* √ sign/*teken* ✓squaring/*kwadr* both sides ✓ std vorm/*stand vorm* ✓factors/*fakt* ✓$x\neq 5$ ✓$x=10$ (6)
1.2	$3x-y+2=0$ and $y=-x^2+2x+8$ $\therefore y=3x+2$ OR $3x+2=-x^2+2x+8$ $3x-(-x^2+2x+8)+2=0$ $x^2+x-6=0$ $(x+3)(x-2)=0$ $x=-3$ or $x=2$ $y=3(-3)+2$ or $y=3(2)+2$ $=-7$ or $y=8$	✓ $y=3x+2$ ✓substitution/*vervanging* ✓std form/*stand vorm* ✓factors/*faktore* ✓*x*-values/*x-waardes* ✓ *y*-values/*y-waardes* (6)
1.3	$3x^2+(k+2)x=1-k$ $3x^2+(k+2)x-1+k=0$ $\Delta=b^2-4ac$ $=(k+2)^2-4(3)(-1+k)$ $=k^2+4k+4+12-12k$ $=k^2-8k+16$ $=(k-4)^2$ $\therefore b^2-4ac$ is a perfect square. Roots are real and rational.	✓ $\Delta=b^2-4ac$ ✓substitution /*vervanging* ✓ $k^2-8k+16$ ✓ $(k-4)^2$ (4) [30]

D. M

QUESTION/*VRAAG* 2

2.1.1	$\frac{5^a.5^{-2}.2^a.2^2}{10^a-10^a.10^{-1}.2}$ $=\frac{(5.2)^a.5^{-2}.2^2}{10^a\left[1-\frac{2}{10}\right]}$ $=\frac{10^a.\frac{4}{25}}{10^a.\frac{8}{10}}$ $=\frac{4}{25}\times\frac{10}{8}$ $=\frac{1}{5}$	✓writing as separate bases/ *skryf as priembasisse* ✓multiplication of bases with same exponents/*vermenigv. van basisse met dies. eksp.* ✓common factor in the denominator/*gemene faktor in die noemer* ✓simplification/*vereenv.* ✓answer/*antw.* (5)
2.1.2	$\frac{\sqrt{27m^6}-\sqrt{48m^6}}{\sqrt{12m^6}}$ $=\frac{3.\sqrt{3}\,m^3-4.\sqrt{3}\,m^3}{2\sqrt{3m^6}}$ $=\frac{\sqrt{3m^6}(3-4)}{2\sqrt{3}\,m^3}$ $=\frac{-\sqrt{3}\,m^3}{2\sqrt{3}\,m^3}$ $=-\frac{1}{2}$ **OR/*OF*** $=\frac{3.\sqrt{3m^6}-4.\sqrt{3m^6}}{2\sqrt{3m^6}}$ $=\frac{\sqrt{3m^6}(3-4)}{2.\sqrt{3m^6}}$ $=\frac{3-4}{2}$ $=-\frac{1}{2}$	✓simplification of all surds/*vereenv. van alle wortelvorme* ✓simplification numerator/*vereenv. van teller* ✓answer/*antw.* (3) ✓ simplification of all surds/ *vereenv. van alle wortelvorme* ✓ simplification of numerator/ *vereenv. van teller* ✓answer/*antw.* (3)

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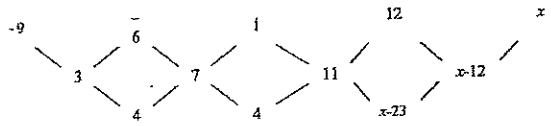
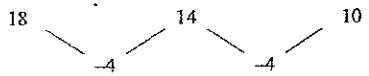
2.2	LHS $=\frac{4\sqrt{2}-8\left(1+\sqrt{2}\right)}{2\sqrt{2}\left(1+\sqrt{2}\right)}$ $=\frac{-4\sqrt{2}-8}{2\sqrt{2}\left(1+\sqrt{2}\right)}$ $=\frac{-4\left(\sqrt{2}+2\right)}{2\left(\sqrt{2}+2\right)}$ $=-2$ $=$ RHS **OR/*OF*** LHS $=\frac{2}{1+\sqrt{2}}\times\frac{1-\sqrt{2}}{1-\sqrt{2}}-\frac{8\times\sqrt{8}}{\sqrt{8}\times\sqrt{8}}$ $=\frac{2-2\sqrt{2}}{1-2}-\sqrt{8}$ $=-2+2\sqrt{2}-2\sqrt{2}$ $=-2$ $=$ RHS	✓ LCD/*KGV* ✓ numerator/*teller* ✓ simplification/ *vereenv.* ✓common factor/*gemene faktor* (4) ✓✓ rationalise the denominator of both fractions/*rasionaliseer die noemer van beide breuke* ✓$-2+2\sqrt{2}$ ✓$-2\sqrt{2}$ (4) **[12]**

DM

QUESTION/*VRAAG* 3

3.1	 $x-23=4$ $x=27$	✓answer/*antw.* (1)
3.2	$2a=4$ $a=2$ $3a+b=3$ $6+b=3$ $b=-3$ $a+b+c=-9$ $2-3+c=-9$ $c=-8$ $T_n=2n^2-3n-8$	✓$a=2$ ✓$b=-3$ ✓$c=-8$ ✓$T_n=2n^2-3n-8$ (4)
3.3	$T_n=2n^2-3n-8+3$ $=2n^2-3n-5$ CA from 3.2	✓answer/*antw.* (1)
3.4	$T_n=400$ $2n^2-3n-5=400$ $2n^2-3n-405=0$ $(n-15)(2n+27)=0$ $n=15$ or $n\neq\frac{-27}{2}$ CA from 3.3 **OR** $2n^2-3n-8+3=400$ $2n^2-3n-8=397$ $2n^2-3n-405=0$ $(n-5)(2n+27)=0$ $n=15$ or $n\neq\frac{27}{2}$	✓ equating/*verg.* ✓std form/*stand vorm* ✓factorisation/*fakt.* ✓$n=15$ (4) ✓ equating/*verg.* ✓std form/*stand vorm* ✓factorisation/*fakt.* ✓only/ *slegs* $n=15$ (4) [10]

QUESTION/*VRAAG* 4

4.1.1	 $T_4=6$	✓answer/*antw.* (1)
4.1.2	$T_n=a+(n-1)d$ $=18+(n-1)(-4)$ $=-4n+22$ Answer only, full marks/ *slegs antwoord volpunte*	✓ substitution/*verv.* ✓ answer/*antw.* (2)
4.1.3	$T_n=22-4n$ $-70=22-4n$ $-92=-4n$ $n=23$	✓substitution/*verv.* ✓answer/*antw.* (2)
4.1.4	$Q_{510}-Q_{509}=T_{509}$ of the linear sequence $=22-4\times509$ $=-2014$	✓making association/*ass.* ✓answer/*antw.* (2)
4.2.1	$2a=2$ $\therefore a=1$ $\therefore a>0$ $\therefore$ this pattern has a minimum value/hierdie patroon het 'n minimum waarde The shape of the graph will be concave up / *die vorm van die grafiek is konkaaf na bo* $T_n=an^2+bn+c$ 	✓value/*wrde* of a ✓$a>0$ ✓ minimum value/*wrde* (3)
4.2.2	$T_5=29$ $\therefore 1(5)^2+5b+c=29$ *ie* $5b+c=4$ ... (1) and $T_{17}=29$ $\therefore 1(17)^2+17b+c=29$ *ie* $17b+c=-260$ ...(2) solve the equations simultaneously $-12b=264$ $\therefore b=-22$ substitute in (1) ie $5(-22)+c=4$ $-110+c=4$ $\therefore c=114$ $\therefore T_n=n^2-22n+114$ OR/*OF*	(5) ✓✓equations/*verg.* (1) & (2) ✓ value of/*waarde* van b ✓ value of/*waarde* van c ✓ answer/*antwoord.*

QUESTION 5

5.1	$x=\frac{-b}{2a}$ $=\frac{-1}{2(-2)}$ $=\frac{1}{4}$ $\therefore y=-2\left(\frac{1}{4}\right)^2+\left(\frac{1}{4}\right)+6$ $y=\frac{49}{8}$ *OR* $f(x)=-2x^2+x+6$ $-2x^2+x+6=0$ $(2x+3)(x-2)=0$ $x=\frac{-3}{2}$ *or* $x=2$ x-value of the axis of symmetry $x=\frac{-\frac{3}{2}+2}{2}=\left(\frac{1}{4}\right)$ $f\left(\frac{1}{4}\right)=-2\left(\frac{1}{4}\right)^2+\frac{1}{4}+6$ $=\frac{49}{8}$ OR $f(x)=-2\left(x^2-\frac{x}{2}\right)+6$ $=-2\left(x^2-\frac{x}{2}+\left(-\frac{1}{4}\right)^2\right)+6-2(-2)\left(-\frac{1}{4}\right)^2$ $=-2\left(x-\frac{1}{4}\right)^2+\frac{49}{9}$ $TP=\left(\frac{1}{4};\frac{49}{8}\right)$	✓ substitution/*verv.* ✓ x-value/*waarde* ✓ substitution/*verv.* ✓ y-value/*waarde* (4)
5.2	$y=-2(0)^2+0+6$ $\therefore y$ intercept $(0;6)$	✓ y-value/*waarde* (1)

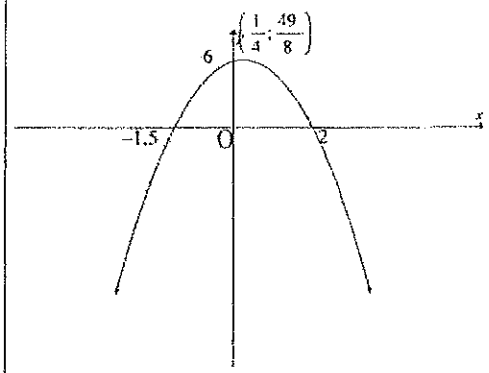
Dm

Please turn over/*Blaai om asseblief*

	$T_n=1(n+p)^2+q$ A.O.S $=\frac{5+17}{2}$ $p=11$ $\therefore T_n=1(n-11)^2+q$ $29=1(17-11)^2+q$ $\therefore q=-7$ $\therefore T_n=(n-11)^2-7$ $T_n=n^2-22n+114$	✓ axis of symmetry/*simm. as* ✓ value of/*waarde* van p ✓ substitution/*verv.* (17 ; 29) or/*of* (5 ; 29) ✓ value of/*waarde* van q ✓ answer/*antw.* **[15]**

Dm

Please turn over/*Blaai om asseblief*

5.3	x intercepts $0 = -2x^2 + x + 6$ $0 = 2x^2 - x - 6$ $0 = (2x+3)(x-2)$ $\therefore x = 2$ or $x = -\frac{3}{2}$ $(2;0)$ and $\left(-\frac{3}{2};0\right)$	✓ $y=0$ ✓ factorisation/*faktorisering.* ✓✓ x-values/*waardes* (4)
5.4		✓ shape/*vorm* ✓ x- intercepts/*x-afsnitte* ✓ turning point/*draaipunt* (3)
5.5	$k = \frac{49}{8}$	✓✓ answer/*antwoorde.* (2)
5.6	New/*Nuwe* turning point/*drpn.t* $\left(\frac{9}{4};\frac{57}{8}\right)$ Equation/*verg.* of h $y = -2\left(x-\frac{9}{4}\right)^2 + \frac{57}{8}$	✓✓ turning points/*draaipunt* ✓ equation/*verg.* (3) **OR/*OF*** ✓✓✓ answer only (3) [17]

QUESTION/*VRAAG* 6

6.1	$x = -3$ and $y = -1$	✓ $x = -3$ ✓ $y = -1$ (2)
6.2	$x \in R; x \neq -3$ OR $x \in (-\infty;-3) \cup (-3:\infty)$	✓✓answer/*antwoord.* (2)

Dm

6.3.1	At B, $x = 0$ $\therefore y = \frac{1}{0+3} - 1$ $y = -\frac{2}{3}$ $\therefore$ OB $= \frac{2}{3}$ units (2)	✓substituton/*vervanging.* ✓ answer/*antwoord.*
6.3.2	At A, $y = 0$ $0 = \frac{1}{x+3} - 1$ $1 = \frac{1}{x+3}$ $x + 3 = 1$ $x = -2$ $\therefore$ OA = 2 units/ eenhede (3)	✓ substitution/*vervanging.* ✓ simplification/*vereenv.* ✓answer/*antwoorde.*
6.4	$\frac{1}{x+3} - 1 = \frac{1}{2}x$ $2 - 2(x+3) = x(x+3)$ $x^2 + 3x - 2 + 2x + 6 = 0$ $x^2 + 5x + 4 = 0$ $(x+4)(x+1) = 0$ $x = -4$ or/*of* $x = -1$ when/*wanneer* $x = -1$; $y = -\frac{1}{2}$ when/*wanneer* $x = -4$; $y = -2$ $\therefore$ C $(-1;-\frac{1}{2})$ and D $(-4;-2)$ (6)	✓ equating the two equations/ *verg. van 2 vergelykings* ✓ standard form/*std vorm* ✓factors/*faktore.* ✓ x-values/*waardes* ✓co-ordinates/*koördinate* C ✓co-ordinates/ *koördinate* D

Dm

6.5	$\frac{1}{x+3} \geq \frac{x+2}{2}$ $\frac{1}{x+3} \geq \frac{x}{2}+1$ $\frac{1}{x+3}-1 \geq \frac{x}{2}$ $\therefore f(x) \geq g(x)$ $\therefore x \leq -4$ or $-3 < x \leq -1$ Answer only, full marks/ *slegs antwoord volpunte*	✓ simplification/ *vereenvoudig* ✓ $f(x) \geq g(x)$ ✓ $x \leq -4$ ✓ $-3 < x \leq -1$ (4) **[19]**

QUESTION/*VRAAG* 7

7.1	$q = 2$ $f(x) = 2.b^{x+1} + 2$ $20 = 2.b^{1+1} + 2$ $18 = 2.b^2$ $9 = b^2$ $b = 3$ $f(x) = 2.3^{x+1} + 2$	✓ substitution of / *vervanging van* $q = 2$ ✓ substitution of / *vervanging van* (1;20) ✓ $b^2=9$ (3)
7.2	$y = 2.3^{-1+1} + 2$ $y = 2.1 + 2$ $y = 4$	✓answer/*antwoord.* (1)
7.3	$m = \frac{y_2 - y_1}{x_2 - x_1}$ $= \frac{20--4}{1-(-1)}$ $= 8$	✓ substitution/*vervanging.* ✓ answer/*antwoord.* (2)
7.4	$h(x) = -2.3^{x+1} + 2$ **OR/OF** Reflected about the x-axis/ refleksie om die x - as $= -2.3^{x+1} - 2$ $\therefore$ Reflected about the asymptote $h(x) = -2.3^{x+1} - 2 + 4$ $= -2.3^{x+1} + 2$	✓✓answer/*antwoord.* **OR/OF** ✓reflection about x-axis/ *refleksie om die x-as* ✓answer/*antwoord.* (2)
7.5	$y < 2$	✓ answer/*antwoord.* (1) **[9]**

QUESTION/*VRAAG* 8

8.1	$A = P(1-i)^n$ $= R25\,000\,(1-0,09)^4$ $= R17\,143,74$	✓ $A = P(1-i)^n$ ✓substitution/*verv.* ✓answer/*antw.* (3)
8.2	$1+i_{eff} = \left(1+\frac{i_{nom}}{m}\right)^m$ $1+i_{eff} = \left(1+\frac{0,1235}{12}\right)^{12}$ $i_{eff} = \left(1+\frac{0,1235}{12}\right)^{12} - 1$ $\therefore$ Rate = 0,13073×100 = 13,07% The effective interest rate/*Die effektiewe rentekoers* is 13.07%	✓ formula/*formule.* ✓ substitution//*vervanging.* ✓simplification/*vereenv.* ✓answer/*antwoord.* (4)
8.3	$A = P(1+i)^n$ $R221\,292,32 = R145\,000\left(1+\frac{r}{100}\right)^6$ $\sqrt[6]{\frac{R221\,292,32}{145\,000}} = 1+\frac{r}{100}$ $\frac{r}{100} = 0,07300000324$ $r = 7,3\%$	✓correct substitution into correct formula/ *korrekte vervanging in korrekte formule* ✓$n=6$ ✓ $\sqrt[6]{\frac{R\,221\,292,32}{145\,000}} = 1+\frac{r}{100}$ ✓ answer/*antw.* (4)
8.4	$A = 15\,000\left(1+\frac{0,096}{4}\right)^{12} - 5\,000\left(1+\frac{0,096}{4}\right)^{10} + 3\,500\left(1+\frac{0.096}{4}\right)^4$ = R17 448,46	✓ $\frac{0,096}{4}$ ✓$15\,000\left(1+\frac{0,096}{4}\right)^{12}$ ✓$-5\,000\left(1+\frac{0,096}{4}\right)^{10}$ ✓$3\,500\left(1+\frac{0.096}{4}\right)^4$ ✓answer/*antw.* (5)

	OR	
	T_0 to $T_{\frac{1}{2}}$,	✓ $\frac{0,096}{4}$
	$A = 15000\left(1+\frac{0.069}{4}\right)^{4\times\frac{1}{2}}$	
	$= R15728,64$	
	A at $T_{\frac{1}{2}}$ = R15728,64 – R5000	✓ *R*10728,64
	= R 10728,64	
	$T_{\frac{1}{2}}$ to T_2,	
	$A = R10728,64\left(1+\frac{0.096}{4}\right)^{\frac{3}{2}\times4}$	✓ *R*12369,28
	$= R12369,28$	
	A at T_2 = R12369,28 + R3500	
	= R15869.28	✓ R15869.28
	T_2 to T_3 = $R15869,28\left(1+\frac{0.096}{4}\right)^{4\times1}$	
	= R 17448,46	✓ R 17448,46 (5)
		[16]

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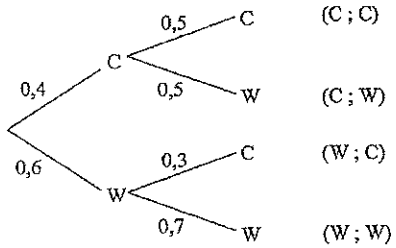
QUESTION/*VRAAG* 9

9.1	Given/*Gegee*: P(A) = 0,2 P(B) = 0,5 P(A or B) = 0,6	
9.1.1	P(A or B) = P(A) +P(B) – P(A and B) 0,6 = 0,2 + 0,5 – P(A and B) P(A and B) = 0,1	✓0,6 = 0,2 + 0,5 – P(A and B) ✓ P(A and B) = 0,1 (2)
9.1.2	P(A and B) = 0,1 P(A) × P(B) = 0,2 × 0,5 = 0,1 ∴ P(A and B) = P(A)×P(B) ∴ A and B are independent/ *A en B is onafhanklik*	✓ P(A) × P(B) = 0,1 ✓ P(A and B) = P(A)×P(B) ✓ conclusion/gevolgtrekking (3)
9.2.1	$a = 15$ $b = 1$ $c = 38$ $d = 3$ $e = 37$ CA must be applied if the values of a and b are calculated incorrectly / *CA moet toegepas word as die waardes van a en b verkeerd bereken is*	✓$a = 15$ ✓$b = 1$ ✓$c = 38$ ✓$d = 3$ ✓e = 37 (5)
9.2.2	P(one learner plays netball or volleyball) = $\frac{25}{100} = \frac{1}{4}$	✓25 ✓answer/*antwoord* (2)
9.3.1		✓ branch at first level with probabilities/ *eerste vertakking met waarskynlikhede* ✓ branches at second level with probabilities/ *tweede vertakkings met waarskynlikhede* ✓ outcomes/*uitkomste* (3)

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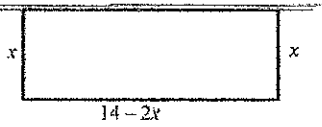
9.3.2	P (second answer correct) = P(C and C)+P(W and C) $= (0,4 \times 0,5) + (0,6 \times 0,3)$ $= 0,38$	✓ addition of probabilities/ *som van waarskynlikhede* ✓ substitution/vervanging ✓ answer/*antwoord.* (3) [18]

QUESTION/*VRAAG* 10

10



Let one of the equal sides = x / *Laat een van die sye* = x

the other side = $14-2x$ / *die ander sy* = $14-2x$

$\text{Area} = (14-2x)x$

$= -2x^2 + 14x$

$x = \dfrac{-14}{2(-2)}$

$= \dfrac{7}{2}m$

$y = 7m$

✓area formula/*oppervl.for.*

✓ $x = \dfrac{-14}{2(-2)}$

✓ answer for/ *antwoord van x*
✓ answer for / *antwoord van y*

(4)

OR/*OF*

$\therefore$ the other side $= 14-2x$ / *die ander sy* $= 14-2x$

$\therefore \text{Area} = (14-2x)x$

$= -2(x^2 - 7x)$

$= -2\left(x^2 - 7x + \dfrac{49}{4} - \dfrac{49}{4}\right)$

$= -2\left[\left(x-\dfrac{7}{2}\right)^2 - \dfrac{49}{4}\right]$

$= -2\left(x-\dfrac{7}{2}\right)^2 + \dfrac{49}{2}$

$\therefore$ when $x = \dfrac{7}{2}$ metres it will have a maximum area

$\therefore$ the other side $= 14-2\left(\dfrac{7}{2}\right)$

$= 7$ metres

OR/*OF*

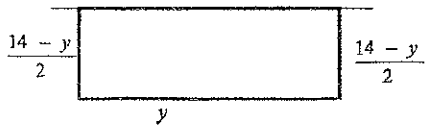
✓area formula/*oppervl.for.*

✓ completing the square/ *voltooiing van vierkant*

✓ answer for/*antwoord van x*
✓ answer for / *antwoord van y*

(4)

DBE



Let the length be y

Width be $\dfrac{14-y}{2}$

$\text{Area} = y\left(7 - \dfrac{1}{2}y\right)$

$= \dfrac{-1}{2}y^2 + 7y$

$y = \dfrac{-7}{2\left(\dfrac{-1}{2}\right)}$

$= 7m$

width $= 3,5m$

✓area formula/*oppervl.for.*

✓ $y = \dfrac{-7}{2\left(\dfrac{-1}{2}\right)}$

✓ answer for y
✓ answer for width/ *antwoord van breedte*

(4)

OR

$\text{Area} = y\left(7 - \dfrac{1}{2}y\right)$

$= \dfrac{-1}{2}y^2 + 7y$

$= \dfrac{-1}{2}(y^2 - 14y)$

$= \dfrac{-1}{2}(y-7)^2 + \dfrac{49}{2}$

lenght $= 7m$

width $= 3,5m$

✓area formula/*oppervl.for.*

✓ completing the square/ *voltooiing van die vierkant*

✓ answer for /antwoord van y
✓ answer for width/ *antwoord van breedte*

(4)
[4]

DBE

TOTAL/*TOTAAL*: 150