



GR 8

MODEL EKSAMEN/EXAM P 1

WISKUNDE/MATHS

NOVEMBER 2014

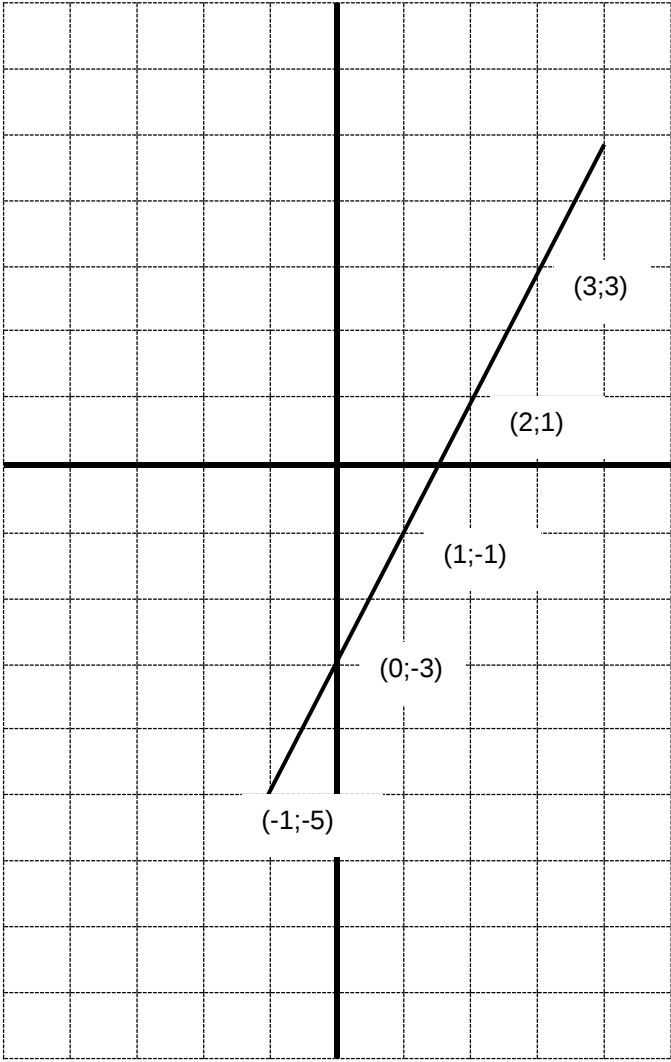
MEMORANDUM

Ques/ Vr	Calculations/Berekeninge	Explanation if necessary/ Verduideliking indien nodig
<u>VRAAG/QUESTION 1</u>		
1.1	(a) 81 ✓ A (b) 363 ✓ A (c) 81; 189; 450 ✓ A (all 3 correct) (d) 5 ✓ A (4)	
1.2	2 678 879 ✓ A (1)	
1.3	✓ ✓ ✓ ✓ $30 + 8 \div 2 - 10 = 24$ (4)	1 A for each number in correct position
1.4	$-20(150 \times -\frac{90}{45} + 10)$ $= -20(-300 + 10)$ ✓ MA $= -20 \times -290$ ✓ CA $= 5\,800$ ✓ CA (3)	1 M A -300 1 CA -290 1CA answer
1.5	$\frac{4}{5} = \frac{80}{100}$ $\frac{9}{25} = \frac{36}{100}$ $\frac{6}{10} = \frac{60}{100}$ $\frac{3}{20} = \frac{15}{100}$ ✓✓ A $\frac{4}{5} ; \frac{6}{10} ; \frac{44}{100} ; \frac{9}{25} ; \frac{3}{20} ; \frac{1}{100}$ ✓CA (3)	A 1 mark for each 2 correct conversions 1 CA descending/dalende
1.6	$1,123 \times 10^5 = 112\,300$ ✓ A $9,2 \times 10^3 = 9\,200$ ✓ A Therefore $9,2 \times 10^3$ smallest/kleinste ✓CA (3)	

Ques/ Vr	Calculations/Berekeninge	Explanation if necessary/ Verduideliking indien nodig
1.7	$ \begin{array}{r} 2 \overline{) 2916} \\ \underline{2} \\ 0 \\ 2 \overline{) 1458} \\ \underline{2} \\ 0 \\ 3 \overline{) 729} \\ \underline{3} \\ 0 \\ 3 \overline{) 243} \\ \underline{3} \\ 0 \\ 3 \overline{) 81} \\ \underline{3} \\ 0 \\ 3 \overline{) 27} \\ \underline{3} \\ 0 \\ 3 \overline{) 9} \\ \underline{3} \\ 0 \\ 3 \overline{) 3} \\ \underline{3} \\ 0 \\ 1 \end{array} $ $2\,916 = 2^2 \times 3^6 \quad \checkmark \quad \text{M}$ $\sqrt{2\,916} = 2 \times 3^3 = 54 \quad \checkmark \text{CA}$ (3)	1 M any method you have taught! 1 CA powers of prime no's Magte van priemfaktore 1 CA antwoord
1.8.	0,5kg:250g = 500g:250g $\checkmark$ C OR 0,5kg:0,25kg = 2:1 $\checkmark$ CA (2)	1 C conversion/omskakeling 1 CA simplification
1.9.	$750 \times \frac{4}{3} \quad \checkmark \checkmark \quad \text{A}$ = R1 000 $\checkmark$ CA (3)	2A x correct numerator & denominator/teller & noemer 1CA answer
1.10.1	Profit = R75 $\checkmark$ A (1)	
1.10.2	$\frac{75}{250} \quad \checkmark \text{CA} \times 100 \quad \checkmark \text{M}$ = 30% $\checkmark$ CA (3)	1 CA fraction with 250 D/N 1M x100 1CA answer
1.11	$2\,800 \times 0,2 \times 2$ = R1 120 $\checkmark$ A = Total amount payable/bedrag betaalbaar = 1 120 + 2 800 = R3 920 $\checkmark$ CA Monthly installments/paalement = $\frac{3\,920}{24} \quad \checkmark \text{CA}$ = R163,33 $\checkmark$ CA (4)	1A interest amount/rente bedrag 1CA total amount/bedrag 1CA $\div 24$ 1CA answer

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[34] <u>VRAAG/QUESTION 2</u>		
2.1	$-2x - x^3 + 9x^2 + 14(x^2 + 2)$ 2.1.1 4 ✓A (1) 2.1.2 $-2(-2) - (-2)^3 + 9(-2)^2 + 14((-2)^2 + 2)$ ✓SF $= 4 + 4 + 36 + 84$ ✓CA $= 132$ ✓CA (3)	1SF substitution/stel in 1CA simplification/ Vereenvoudiging 1CA answer
2.2.1	$\frac{p^4 \cdot q^4 \cdot q^2 \cdot p^3}{q^6 \cdot p^6}$ $= p^{\check{A}} \cdot q^{\check{A}}$ $= p$ ✓CA (3)	1A p correct 1A q correct 1CA answer
2.2.2	$(-8x^4y^2)(5x^3y^4)(-2x)$ $= 80 x^{\check{A}} y^{\check{A}}$ (3)	1A for each item completely correct Vir elke item heeltemal korrek
2.2.3	$-5(2x^2 + x - 20) + 12x^2 + 3x$ ✓A $= -10x^2 - 5x + 100 + 12x^2 + 3x$ $= 2x^2 - 2x + 100$ ✓✓CA (3)	1A brackets correctly removed/ Hakies korrek verwyder 1CA 3 terms 1CA correctly simplified

Ques/ Vr	Calculations/Berekeninge	Explanation if necessary/ Verduideliking indien nodig												
2.3.1	$4x + 5 = 5x - 9$ $-x = -14 \checkmark A$ $x = 14 \checkmark CA$ (2)	1A both sides correct 1CA answer												
2.3.1	$5(x - 1) - (1 - 2x) = 8$ $\checkmark A \quad \checkmark A$ $5x - 5 - 1 + 2x = 8$ $7x = 14 \checkmark CA$ $x = 2 \checkmark CA$ (4)	2A for both brackets correctly removed 1CA for simplification 1CA for answer												
2.4	Let son be x Then father = $x + 25 \checkmark$ In 5 years'time/oor 5 jaar Son = $x + 5$ Father = $x + 30 \checkmark$ Then/dan: $2(x + 5) = x + 30 \checkmark$ $2x + 10 = x + 30$ $x = \text{son} = 20 \checkmark$ (4)	ANY METHOD!! ENIGE METODE!!												
2.5.1	$13 \checkmark \checkmark A$ (2)													
2.5.2	$N = 3p - 2 \checkmark \checkmark \checkmark A$ (3)													
2.5.3	$N = 3(100) - 2 \checkmark SF$ $= 298 \checkmark CA$ (2)	1 SF substitute/instel 1CA answer												
2.6.1	6:00 (1)													
2.6.2	7:30 (1)													
2.6.3	1h (2)													
2.6.4	9:00 (1)													
2.7.1	<table><tr><td>x</td><td>-1</td><td>0</td><td>1</td><td>2</td><td>3</td></tr><tr><td>y</td><td>-5</td><td>-3</td><td>-1</td><td>1</td><td>3</td></tr></table> $\checkmark \checkmark \checkmark CA$	x	-1	0	1	2	3	y	-5	-3	-1	1	3	1 mark for each two correct, plus 1 mark for last one correct 1 punt vir elke twee korrek, plus 1 punt vir die laaste 1 korrek
x	-1	0	1	2	3									
y	-5	-3	-1	1	3									

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	(3)	
2.7.2	ANNEXURE A/BYLA E A  Scales on both x-and y- axes correct/ Skale vir beide x-en y-asse korrek ✓A All 5 points plotted correctly/ Al 5 punte korrek geplot ✓CA Join points for a straight line/Verbind punte vir reguitlyn ✓CA	
	(3)	
	[41]	

Ques/ Vr	Calculations/Berekeninge	Explanation if necessary/ Verduideliking indien nodig
TOTAL 75		