



GR 8

EKSAMEN/EXAM

WISKUNDE/MATHS

June 2014

MEMORANDUM

Ques/ Vr	Calculations/Berekeninge	Explanation if necessary/ Verduideliking indien nodig
<u>VRAAG/QUESTION 1</u>		
1.1	1.1.1 20; 25; 30; 35; 40 ✓ 1.1.2 2; 5 ✓ 1.1.3 4; 6; 8 ✓ (3)	
1.2	-30 933; -30 399; 30 399; 30 933 ✓✓ (2)	1 mark for each two correct/ 1 punt vir elke twee korrek
1.3	$30\,478 = 3,0478 \times 10^4$ ✓ ✓ (2)	
1.4	$-8 + 7 - \frac{15}{3} + 2$ van -8 ✓ ✓ AA $= -8 + 7 - 5 - 16$ $= -22$ ✓ CA (3)	1 A mark/punt -5, 1 A mark/punt -16, 1CA mark -22
1.5	1.5.1 1 296 $\begin{array}{r} 2 \overline{) 1\,296} \\ 2 \overline{) 648} \\ 2 \overline{) 324} \\ 2 \overline{) 162} \\ 3 \overline{) 81} \\ 3 \overline{) 27} \\ 3 \overline{) 9} \\ 3 \overline{) 3} \\ \underline{} 1 \end{array}$ ✓ $1\,296 = 2^4 \times 3^4$ ✓ (2)	
	1.5.2 $\sqrt{1\,296}$ $= 2^2 \times 3^2$ ✓ CA = 36 ✓ CA (2)	CA answer depends on 1.5.1 CA antw hang af van 1.5.1
1.6	1.6.1 Parts/dele = 5 1 part/deel = $450 \div 5 = R\,90$ ✓ Jake gets = $90 \times 3 = R\,270$ ✓ Brad kry = $90 \times 2 = R\,180$ ✓ (3)	Accept any method/ Aanvaar enige metode
	16.2 15% of R 600 = R 90 ✓ New salary/salaris = $600 + 90$ ✓ R 690 ✓ (3)	Accept any method/ Aanvaar enige metode
[20]		

<u>VRAAG/QUESTION 2</u>		
2.1	2.1.1 4 ✓ 2.1.2 -2 ✓ 2.1.3 1 ✓ 2.1.4 $-2(-2) - (-2)^3 + 9(-2)^2 + 1$ ✓ SF $= 49$ ✓ CA (5)	1 SF subst./vervang -2 1 CA answ/antw
2.2	2.2.1 $-8 - 9h + 2h + 13$ $= 5 - 7h$ ✓ ✓ (2)	
	2.2.2 $3ab + 2a + b + a - 3b^2 - 3a - 4ba + 5b^2 - b$ $= -ab + 2b^2$ ✓ ✓ ✓ (3)	
2.3	2.3.1 $x^0 \cdot x^3$ $= 1 \cdot x^3$ ✓ $= x^3$ ✓ (2)	
	2.3.2 $\frac{n^6 \cdot m^4 \cdot n^4 \cdot m^2}{n^2 \cdot m^6 \cdot n^4 \cdot m^0}$ ✓ ✓ ✓ $= n^{6+4-2-4} \cdot m^{4+2-6}$ $= n^4 \cdot m^0$ ✓ CA $= n^4$ ✓ CA (4)	
	2.3.3 $(-5x^3y^2)(3x^2y^4)(-2x)$ ✓ ✓ ✓ $= 30x^6y^6$ (3)	
2.4	2.4.1 $5x(2x + 4y)$ $= 10x^2 + 20xy$ ✓ (2)	
	2.4.2 $-4(3x^2 + 6x - 20) + 12x^2 + 3x$ ✓ ✓ ✓ $= -12x^2 - 24x + 80 + 12x^2 + 3x$ $= -21x + 80$ ✓ CA (4)	
	2.4.3 $\frac{4xy - 32x^2y^3}{4xy}$ $= \frac{4xy}{4xy} - \frac{32x^2y^3}{4xy}$ ✓ ✓ ✓ $= 1 - 8xy^2$ (4)	
2.5	2.5.1 $4x = 3x + 5$ $4x - 3x = 5$ ✓ $x = 5$ ✓ CA (2)	

	2.5.2	$x + 5 = -10$ $x = -5 - 10 \checkmark$ $x = -15 \checkmark$ CA (2)	
	2.5.3	$-3(p + 1) = p - (2p - 1)$ $\checkmark \quad \checkmark$ $-3p - 3 = -p + 1$ $-3p + p = 3 + 1 \checkmark$ CA $-2p = 4 \checkmark$ CA $p = -2 \checkmark$ CA (5)	
2.6	2.6.1	$x - 6 \checkmark = 20 - 9 \checkmark$ OR 11 (2)	
	2.6.2	$x = 17 \checkmark \checkmark$ CA (2)	
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<u>VRAAG/QUESTION 3</u>			
3.1	3.11.	 $\checkmark$ 6 rectangles/reghoeke $\checkmark$ 19 match sticks/vuurhoutjies (2)	
	3.1.2	$a = 13 \checkmark$ $b = 31 \checkmark \checkmark$ (3)	
	3.1.3	$K = 3p + 1 \checkmark \checkmark$ (2)	
	3.1.4	$K = 3(58) + 1 \checkmark$ $K = 175 \checkmark$ (2)	
	3.1.5	$148 = 3p + 1$ $3p = 147 \checkmark$ $P = 49 \checkmark$ (2)	
[11]			

<u>VRAAG/QUESTION 4</u>		
4.1	1c 2a 3b 4e 5d	1 x 5 = (5)
4.2	Yes/ Ja ✓ All angles 90°, all sides equal, i.e. a rectangle with equal sides /✓ Alle hoeke 90°, alle sye ewe lank, d.i. 'n reghoek met gelyke sye	(2)
4.3	$33^\circ + a + 18^\circ = 180^\circ$ ✓ [∠s on str line/ ∠e op reguitlyn] ✓ $a = 129^\circ$ ✓	
	$b + 70^\circ + 114^\circ + 125^\circ = 360^\circ$ ✓ [sum of ∠s in quad/ som ∠e in vierh] ✓ $b = 51^\circ$ ✓	
	$c = 60^\circ$ ✓ [∠ of equilateral Δ/ ∠ van gelyks. Δ] ✓	
	$d = 120^\circ$ ✓ [∠s on str line/ ∠e op reguitlyn] ✓	(10)
4.4.1	$3x + 2x + 32^\circ + 4x - 23^\circ = 180^\circ$ ✓ [sum of/som van ∠s in Δ] ✓ $9x + 9^\circ = 180^\circ$ ✓ CA $9x = 171^\circ$ ✓ CA $x = 19^\circ$ ✓ CA	(5)
4.4.2	$2x + 40^\circ = x + 90^\circ$ ✓ [opp. ∠s parm/teenoorst. ∠e parm] ✓ $2x - x = 90^\circ - 40^\circ$ $x = 50^\circ$ ✓ $\angle A = 2(50^\circ) + 40^\circ$ ✓ $= 140^\circ$ ✓	(5)
[27]		
/100/		