



**GAUTENG PROVINCE**

EDUCATION  
REPUBLIC OF SOUTH AFRICA

**GAUTENG DEPARTMENT VAN ONDERWYS**

**GRAAD 8**

**JUNIE GEMEENSKAPLIKE EKSAMEN 2014**

**MEMORANDUM**

|               |          |                               |
|---------------|----------|-------------------------------|
| <b>VAK</b>    | <b>:</b> | <b>WISKUNDE</b>               |
| <b>TAAK 5</b> | <b>:</b> | <b>GEMEENSKAPLIKE EKSAMEN</b> |
| <b>TYD</b>    | <b>:</b> | <b>2 H</b>                    |
| <b>PUNTE</b>  | <b>:</b> | <b>100</b>                    |

Afdeling A (1 × 10)

| Vraag | Antwoord |
|-------|----------|
| 1.    | C        |
| 2.    | B        |
| 3.    | C        |
| 4.    | C        |
| 5.    | D        |
| 6.    | A        |
| 7.    | B        |
| 8.    | D        |
| 9.    | D        |
| 10.   | C        |

## Afdeling B

### Vraag 1

1.1

$$\begin{array}{r} 2406 \quad \checkmark \\ 6 \overline{) 14436} \\ \underline{-12} \phantom{00} \\ 24 \phantom{00} \\ \underline{-24} \phantom{00} \\ 3 \phantom{00} \quad \checkmark \text{ (lang deling metode)} \\ \underline{-0} \phantom{00} \\ 36 \phantom{00} \\ \underline{36} \phantom{00} \\ 0 \quad \checkmark \end{array}$$

(3)

1.2.1

$$0,12(3 + \frac{1}{3}) \div (1,35 + 0,65)$$

$$= \frac{12}{100}(\frac{10}{3}) \div 2 \quad \checkmark$$

$$= \frac{12}{100}(\frac{10}{3}) \times \frac{1}{2} \quad \checkmark$$

(4)

$$= \frac{120}{600} \quad \checkmark$$

$$= \frac{1}{5} \quad \checkmark$$

1.2.2

$$(\sqrt[3]{8} + \sqrt{16}) \div \sqrt{9}$$

$$= (2 + 4) \div 3 \quad \checkmark$$

(3)

$$= 6 \div 3 \quad \checkmark$$

$$= 2 \quad \checkmark$$

1.3

$$= -14^{\circ}\text{C} + 5^{\circ}\text{C} \quad \checkmark$$

$$= -9^{\circ}\text{C} \quad \checkmark$$

(2)

**[12]**

## Vraag 2

2.1  $\frac{3}{8} = \frac{6}{x}$  ✓  
 $3x = 48$  ✓  
 $x = \frac{48}{3}$  ✓  
 $= 16 \text{ mans}$  ✓ (4)

2.2  $1 \text{ kg} = \text{R}35$   
 $250 \text{ g} = 0,25 \text{ kg}$  ✓  
 $250 \text{ g} \rightarrow \frac{0,25 \times \text{R}35}{1 \text{ kg}}$  ✓  
 $= \text{R}8,75$  ✓ (3)

2.3.1  $11$  ✓ en  $14$  ✓ (2)

2.3.2  $T_1 = 2 = 3(1) - 1$   
 $T_2 = 5 = 3(2) - 1$   
 $T_3 = 8 = 3(3) - 1$  ✓  
 $\therefore T_n = 3n - 1$  ✓✓ (3)

2.3.3  $T_n = 3n - 1$   
 $T_{15} = 3(15) - 1$  ✓✓  
 $= 44$  ✓ (3)

[15]

## Vraag 3

3.1  $70\% \text{ van R}125$   
 $= \frac{70}{100} \times \text{R}125$  ✓  
 $= \text{R}87,50 \rightarrow \text{Wat jy betaal.}$  ✓ (2)

3.2.1  $\text{£}1 = \text{R}13,14$  ✓  
 $\text{£}2000 = 2000 \times 13,14$  ✓  
 $= \text{R}26\,280$  ✓ (3)

3.2.2  $\text{R}10,46 = \$1$  ✓  
 $\text{R}6\,000 = \frac{6000 \times 1}{10,46}$  ✓  
 $= \$573,61$  ✓ (3)

$$\begin{aligned}
 3.3 \quad SI &= K \times i \times n \quad \checkmark \\
 &= R10\,000 \times 0,12 \times 3 \quad \checkmark \checkmark \\
 &= R3\,600 \quad \checkmark
 \end{aligned}
 \tag{4}$$

$$\begin{aligned}
 3.4 \quad &10\% \text{ van } R7\,500 \\
 &= \frac{10}{100} \times R7\,500 \\
 &= R750 \quad \checkmark \\
 &\quad R350 \times 24 \\
 &= R8\,400 \quad \checkmark \\
 \text{Totale bedrag betaal} &= R750 + R8\,400 \quad \checkmark \\
 &= R9\,150 \quad \checkmark
 \end{aligned}
 \tag{4}$$

**[16]**

Vraag 4

$$4.1.1 \quad 23\,000\,000 = 2,3 \times 10^7 \quad \checkmark \tag{1}$$

$$4.1.2 \quad 0,000725 = 7,25 \times 10^{-4} \quad \checkmark \tag{1}$$

$$\begin{aligned}
 4.2.1 \quad &\frac{(xy^2)^3}{x^3y^4} \\
 &= \frac{x^3y^6}{x^3y^4} \quad \checkmark \checkmark = y^2 \quad \checkmark
 \end{aligned}
 \tag{3}$$

$$\begin{aligned}
 4.2.2 \quad &\frac{-12a^2b^3 + 8a^3b^2 + 6a^2b^4}{2a^2b^2} \\
 &= \frac{-12a^2b^3}{2a^2b^2} + \frac{8a^3b^2}{2a^2b^2} + \frac{6a^2b^4}{2a^2b^2} \quad \checkmark \\
 &= -6b \quad \checkmark + 4a \quad \checkmark + 3b^2 \quad \checkmark
 \end{aligned}
 \tag{4}$$

$$\begin{aligned}
 4.3.1 \quad &-2a(a-d) + 2d(2a-3d) \\
 &= -2a^2 + 2ad \quad \checkmark + 4ad - 6d^2 \quad \checkmark \\
 &= -2a^2 + 6ad - 6d^2 \quad \checkmark
 \end{aligned}
 \tag{3}$$

$$\begin{aligned}
4.3.2 \quad & \frac{6a+12b}{2} + \frac{4a+16b}{2} \\
&= \frac{6a}{2} + \frac{12b}{2} + \frac{4a}{2} + \frac{16b}{2} \\
&= 3a + 6b \checkmark + 2a + 8b \checkmark \\
&= 5a + 14b \checkmark \checkmark
\end{aligned}$$

(4)

[16]

Vraag 5

$$\begin{aligned}
5.1.1 \quad & 4x - 3x - 5 = 0 \\
& x - 5 = 0 \checkmark \\
& x = 5 \checkmark
\end{aligned}$$

(2)

$$\begin{aligned}
5.1.2 \quad & 6x + 2 = 4x - 10 \\
& 6x - 4x = -10 - 2 \checkmark \\
& 2x = -12 \checkmark \\
& x = -6 \checkmark
\end{aligned}$$

(3)

$$\begin{aligned}
5.1.3 \quad & \frac{4x-1}{3} = 5 \\
& \frac{4x-1}{3} \times 3 = 5 \times 3 \checkmark \\
& 4x - 1 = 15 \checkmark \\
& 4x = 16 \checkmark \\
& x = 4 \checkmark
\end{aligned}$$

(4)

$$\begin{aligned}
5.2 \quad & y = 2(x - 3) \\
& x = -2 \quad ; \quad y = 2(-2 - 3) \checkmark \\
& \quad \quad \quad = 2(-5) \\
& \quad \quad \quad = -10 \checkmark \\
& x = -3 \quad ; \quad y = 2(-3 - 3) \\
& \quad \quad \quad = 2(-6) \\
& \quad \quad \quad = -12 \checkmark \\
& x = -6 \quad ; \quad y = 2(-6 - 3) \\
& \quad \quad \quad = 2(-9) \\
& \quad \quad \quad = -18 \checkmark
\end{aligned}$$

(4)

$$\begin{aligned}
5.3 \quad & \text{Die twee DVDs kos } x + y \\
& \text{Die derde DVD kos } 2(x + y) \checkmark \\
& \text{As al drie saam C kos, dan sal} \\
& C = x + y + 2(x + y) \checkmark \\
& C = 3x + 3y \checkmark
\end{aligned}$$

(3)

[16]

Vraag 6

6.1  $i + 55^0 + 62^0 = 180^0$  ✓ [som van  $\angle$ e van  $\Delta$ ] ✓  
 $i + 117^0 = 180^0$   
 $i = 180^0 - 117^0$   
 $i = 63^0$  ✓  
 $h = 62^0$  ✓  
 $j = i = 63^0$  ✓ } [Ooreenk  $\angle$ e ; BC//ED] ✓ (6)

6.2  $x = 60^0$  [ Ooreenk  $\angle$ e ; FG//KL] ✓  
 $x + y = 180^0$  [Aangrensende  $\angle$ e op reguitlyn] ✓  
 $y = 180^0 - 60^0$  ✓  
 $= 120^0$  ✓ (4)

6.3  $p = q = 22^0$  [Binne  $\angle$ e van  $\Delta$ ] ✓  
 $\therefore \Delta ABC \parallel \Delta FDE$  [HHH] ✓ (2)

6.4  $x = 15 \text{ cm}$  ✓ en  $z = 10 \text{ cm}$  ✓ (3)  
[ooreenstemmende sye gelyk van  $\equiv \Delta$ s] ✓

[15]