

KLASKAMER 10

GRAAD 11 WISKUNDE: EPISODE 28

GELYKTYDIGE VERGELYKINGS & ONGELYKHEDE

VRAAG 1:

Los op vir x en/of y in elkeen van die volgende:

a. $y + 4x = 12$ en $y - 4x^2 + 8x = -3$ (6)

b. $x(x - 2) \geq 15$ (4)

BLIKslim

www.klaskamer10.co.za

TOTAAL: 10 PUNTE

GRAAD 11 WISKUNDE: EPISODE 28 (MEMORANDUM)

GELYKTYDIGE VERGELYKINGS & ONGELYKHEDE

VRAAG 1

a)

$$y + 4x = 12 \dots (1)$$

$$y - 4x^2 + 8x = -3 \dots (2)$$

Uit (1): $y = -4x + 12 \dots (3) \checkmark$

Vervang (3) in (2)

$$-4x + 12 - 4x^2 + 8x = -3 \checkmark$$

$$0 = 4x^2 - 4x - 15 \checkmark$$

$$0 = (2x + 3)(2x - 5) \checkmark$$

$$\therefore x = -\frac{3}{2} \text{ of } x = \frac{5}{2} \checkmark$$

Vervang in (3)

$$\therefore y = -4\left(-\frac{3}{2}\right) + 12 = 18$$

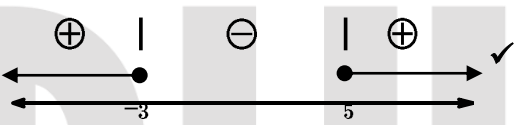
$$\text{of } y = -4\left(\frac{5}{2}\right) + 12 = 2 \checkmark$$

$$\therefore (x; y) = \left(-\frac{3}{2}; 18\right) \text{ of } \left(\frac{5}{2}; 2\right) \checkmark$$

b)

$$x(x - 2) \geq 15$$

$$x^2 - 2x - 15 \geq 0 \checkmark$$

$$(x - 5)(x + 3) \geq 15 \checkmark$$


$$x \leq -3 \text{ of } x \geq 5 \checkmark$$