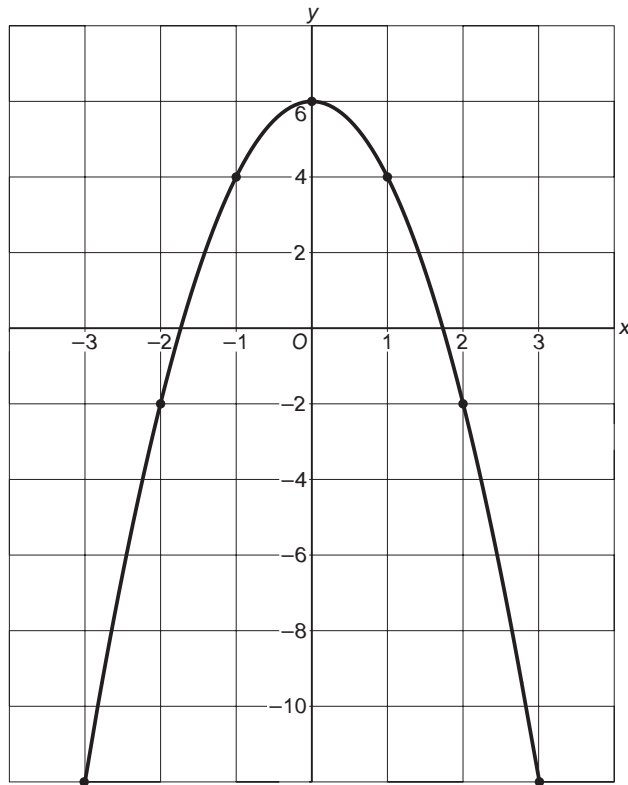


# Diagnostische toets

bladzijde 186

**1** a

|     |     |    |    |   |   |    |     |
|-----|-----|----|----|---|---|----|-----|
| $x$ | -3  | -2 | -1 | 0 | 1 | 2  | 3   |
| $y$ | -12 | -2 | 4  | 6 | 4 | -2 | -12 |



b Een bergparabool, omdat  $a < 0$ .

c (0, 6)

$$d \quad y = -2 \cdot (-4)^2 + 6 = -2 \cdot 16 + 6 = -32 + 6 = -26$$

Ja,  $(-4, -26)$  ligt op de grafiek.

**2** a  $y = -4 \cdot (-6)^2 + 12 = -4 \cdot 36 + 12 = -132$

Dus  $p = -132$

b  $-32 = a \cdot 8^2$

$$-32 = a \cdot 64$$

$$a = -\frac{1}{2}$$

c  $-12 = -(-2)^2 + b$

$$-12 = -4 + b$$

$$b = -8$$

**3** a  $\sqrt{20} + 7 \approx 11,472$

b  $\sqrt{3} \cdot (5,2 - 2\sqrt{6}) \approx 0,521$

c  $3\sqrt{21,2 - 8,3} \approx 10,775$

d  $5\sqrt{7} \cdot (2 + \sqrt{15}) \approx 77,692$

**4** lengte grasveld is  $\sqrt{250} \approx 15,81$  m.  
 lengte grasveld + pad  $\approx 20,81$  m.  
 oppervlakte totaal  $\approx 433,11$  m<sup>2</sup>  
 oppervlakte tegelpad =  $433,11 - 250 = 183,11$  m<sup>2</sup>

**5** a  $\sqrt{81} + \sqrt{25} = 9 + 5 = 14$   
 b  $3\sqrt{25-9} = 3 \cdot 4 = 12$   
 c  $-5\sqrt{144} + 2\sqrt{9} = -60 + 6 = -54$   
 d  $-3\sqrt{49} - 81 = -21 - 81 = -102$

**6** a  $(5\sqrt{3})^2 - 3(\sqrt{2})^2 = 75 - 6 = 69$   
 b  $-3\sqrt{16} + (-2\sqrt{5})^2 = -12 + 20 = 8$   
 c  $5\sqrt{2} - \sqrt{2} = 4\sqrt{2}$   
 d  $3\sqrt{5} \cdot -5\sqrt{3} = -15\sqrt{15}$   
 e  $3\sqrt{8} \cdot -5\sqrt{2} = -15\sqrt{16} = -60$   
 f  $-8\sqrt{3} + 2\sqrt{3} = -6\sqrt{3}$

**7** a  $\sqrt{63} = 3\sqrt{7}$   
 b  $\sqrt{48} = 4\sqrt{3}$   
 c  $\sqrt{500} + \sqrt{45} = 10\sqrt{5} + 3\sqrt{5} = 13\sqrt{5}$   
 d  $\sqrt{108} - 2\sqrt{27} = 6\sqrt{3} - 6\sqrt{3} = 0$

bladzijde 187

**8** a lengte binnenste hek =  $\pi \times 85 = 267,04$  m.  
 b lengte buitenste hek =  $\pi \times 89 = 279,60$  m.

**9** a omtrek figuur =  $30 + 15 + \pi \times 50 \times 0,5 + 15 + 30 + \pi \times 20 \times 0,5$   
 $\approx 200$  mm  
 oppervlakte figuur =  $30 \times 20 + \pi \times 25^2 \times 0,5 + \pi \times 10^2 \times 0,5$   
 $\approx 1739$  mm<sup>2</sup>

**10** a oppervlakte (oorbel) =  $\pi \cdot 1\frac{1}{2}^2 - \pi \cdot 0,75^2 \approx 5,30$  cm<sup>2</sup>  
 b Per oorbel houdt ze  $9 - 5,30 \approx 3,70$  cm<sup>2</sup> over.  
 Dus in totaal houdt ze  $12 \times 3,70 \approx 44,4$  cm<sup>2</sup> over.

## Herhaling

bladzijde 188

**1** a  $y = 2 \cdot 2^2 - 7 = 8 - 7 = 1$   
 b

|   |    |    |    |    |    |   |    |
|---|----|----|----|----|----|---|----|
| x | -3 | -2 | -1 | 0  | 1  | 2 | 3  |
| y | 11 | 1  | -5 | -7 | -5 | 1 | 11 |