

## HOOFSTUK 8 – ANALITIESE MEETKUNDE:

### Afstand Tussen Twee Punte: (Afstandsformule)

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

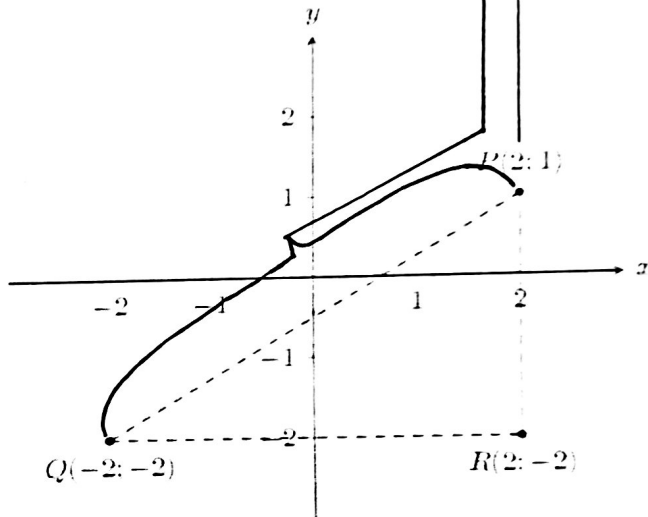
← leer formule

#### Punt

'n Punt is 'n georderde paar wat as  $(x; y)$  voorgestel word.

#### Afstand

Afstand is die lengte tussen twee punte op 'n kartesiese vlak.



#### 1. Bepaal die lengte van die lyn wat die punte verbind:

1.1  $\overset{1}{A}(2; 3)$  en  $\overset{2}{B}(6; 11)$

$$\begin{aligned} d_{AB} &= \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} \\ &= \sqrt{(6 - 2)^2 + (11 - 3)^2} \\ &= \sqrt{(4)^2 + (8)^2} \\ &= \sqrt{16 + 64} \\ &= 4\sqrt{5} \approx 8,94 \text{ eenh.} \end{aligned}$$

1.2  $\overset{1}{C}(3; 11)$  en  $\overset{2}{D}(6; 2)$

$$\begin{aligned} d_{CD} &= \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} \\ &= \sqrt{(6 - 3)^2 + (2 - 11)^2} \\ &= \sqrt{(3)^2 + (-9)^2} \\ &= \sqrt{9 + 81} \\ &= 3\sqrt{10} \approx 9,49 \text{ eenh.} \end{aligned}$$

1.3  $\overset{1}{K}(-8; -5)$  en  $\overset{2}{L}(-3; 3)$

$$d_{KL} = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

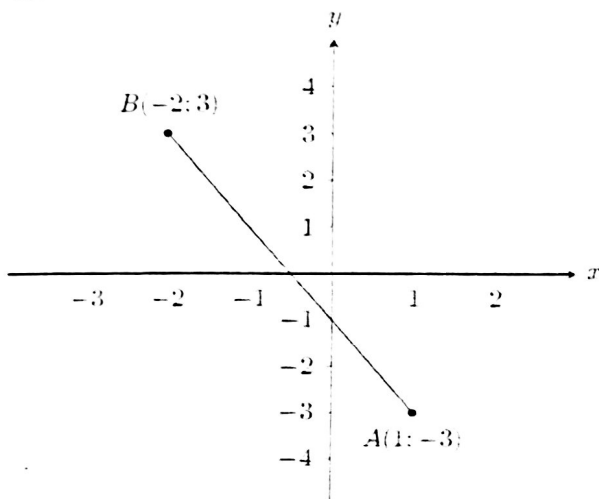
1.4  $\overset{1}{P}(-10; -2)$  en  $\overset{2}{Q}(-6; -8)$

$$\begin{aligned} d_{PQ} &= \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} \\ &= \sqrt{(-6 - (-10))^2 + (-8 - (-2))^2} \\ &= \sqrt{(-6 + 10)^2 + (-8 + 2)^2} \end{aligned}$$

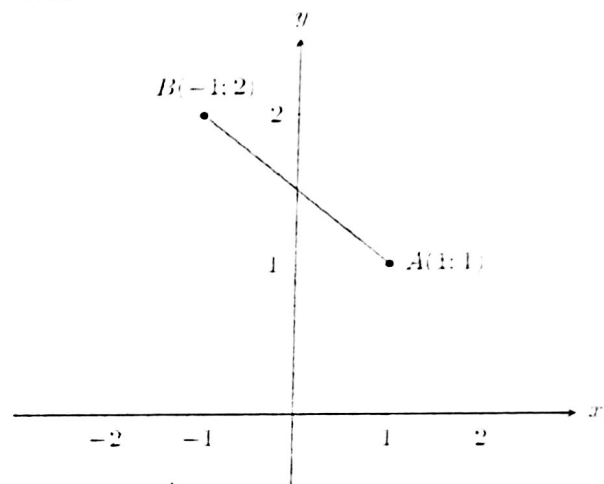
1.5  $R(-7; -2)$  en  $S(-1; 6)$

1.6  $A(-6; -8)$  en  $B(3; 3)$

1.7.



1.8.



HUISWERK: Bl. 210; Oef 1; # 1 en 3