# Proeftoets probleemaanpak antwoorden

## Opgave 1

$\frac{4+3}{\frac{9}{60}+\frac{6}{60}}$ =28 km/uur

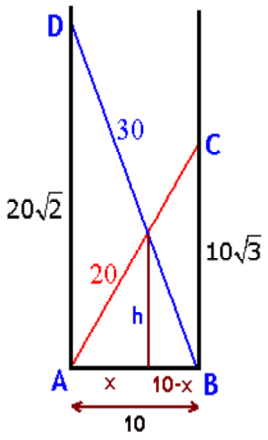
## Opgave 2

$$\begin{cases} AD = 20\sqrt{2} \\ BC = 10\sqrt{3} \end{cases}$$

$$\begin{cases} \frac{20\sqrt{2}}{10} = \frac{h}{10-x} \Rightarrow x = 10 - \frac{1}{4}\sqrt{2}\cdot h \\ \frac{10\sqrt{3}}{10} = \frac{h}{x} \Rightarrow x = \frac{1}{3}\sqrt{3}\cdot h \end{cases}$$

$$\frac{1}{3}\sqrt{3}\cdot h = 10 - \frac{1}{4}\sqrt{2}\cdot h$$

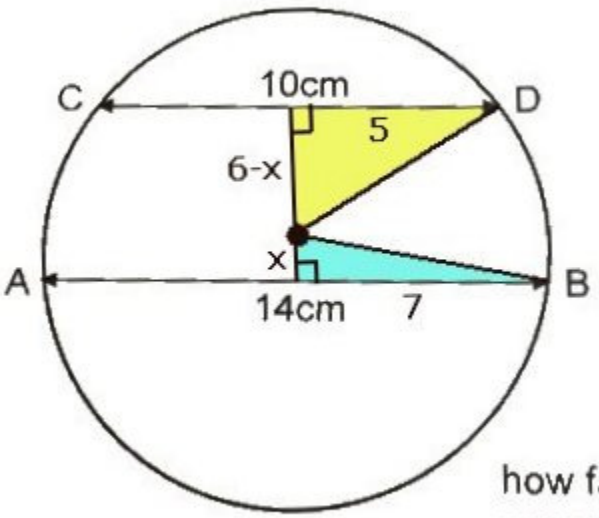
$$h = 16\sqrt{3} - 12\sqrt{2}$$




De hoogte is $16\sqrt{3} - 12\sqrt{2}$

## Opgave 3

AB and CD are parallel chords, 6cm apart

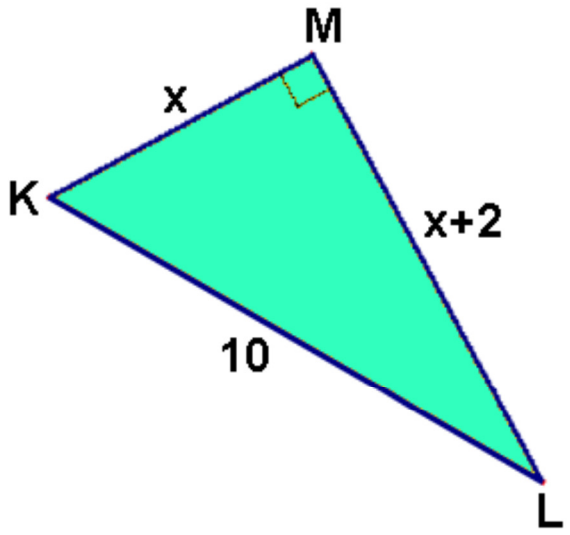



how far is the line AB away from the centre?

## Opgave 4

De oppervlakte van het pad is 2·100=200m$^2$. Het kost 80 euro per 10m$^2$, dus 200m$^2$ kost €1600.

**Opgave 5**




Volgens de stelling van Pythagoras:

$$x^2 + (x+2)^2 = 10^2$$
$$x^2 + x^2 + 4x + 4 = 100$$
$$2x^2 + 4x + 4 = 100$$
$$2x^2 + 4x - 96 = 0$$
$$x^2 + 2x - 48 = 0$$
$$(x+8)(x-6) = 0$$
$$x = -8 \vee x = 6$$

De oplossing $x = -8$ voldoet niet, maar $x = 6$ zou een oplossing kunnen zijn. $KM = 6$ en $LM = 8$, de oppervlakte van $\Delta KLM$ is gelijk aan:

$\frac{1}{2} \cdot KM \cdot LM = \frac{1}{2} \cdot 6 \cdot 8 = 24.$