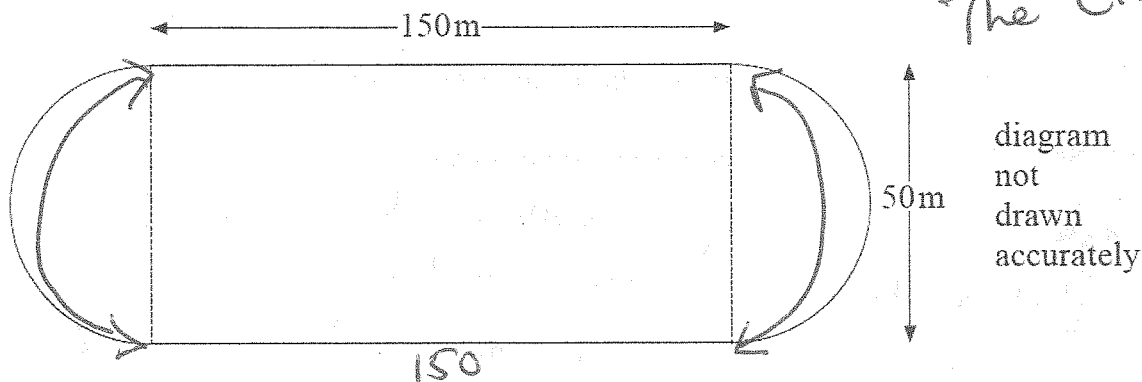


$m^3 = 30$ days to go!
 if πr^2 sounds like area to me
 I need the circumference just use πd

9 Sue is training to compete in a 10 km walk.

A diagram of her local athletics track is shown below.

The track consists of a rectangle and two semicircles.



Think Circles!
 Think The Circle Song!

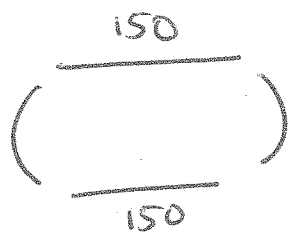
How many complete laps are needed to ensure she walks 10 km? 10000m

You must show all your working.

$C = \pi d$ put both ends together

$C = \pi \times 50$

$C = 157.1m$



$150 + 150 + 157.1$
457.1m
 in one lap

$10000 \div 457.1$

21.8

22 laps

Does This make sense?

Answer 22 laps [4]

more circles.

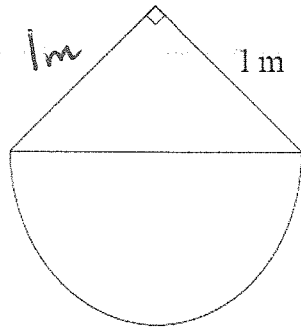
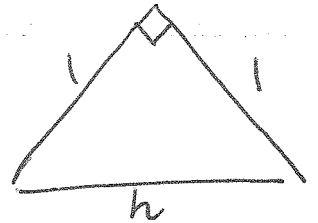


diagram not drawn accurately



$$h^2 = 1^2 + 1^2$$

$$h^2 = 1 + 1$$

$$h = \sqrt{2}$$

Pythagoras

The composite shape consists of a right-angled isosceles triangle and a semicircle.

(a) Show that the area of the composite shape is approximately 1.285 m²

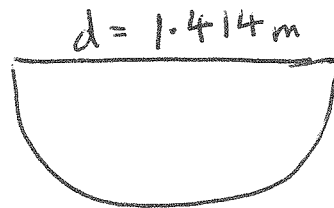
Triangle.

$$\text{Area} = \frac{1}{2} \times \text{base} \times \text{height}$$

$$= \frac{1}{2} \times 1 \times 1$$

$$= 0.5$$

semi-circle.
What is the radius?
We don't know



$$A = \pi r^2$$

$$A = \pi \times 0.71^2$$

$$A = 1.57$$

then \div by 2

[4]

$$\text{Total Area} = 0.5 + 0.785$$

$$= 1.285 \text{ m}^2$$

(b) Find the force applied to the area of the composite shape when the pressure is 5 N/m²

look units ↖

$$\frac{\text{Force}}{\text{Area}} = \frac{\text{N}}{\text{m}^2}$$

$$\text{Pressure} = \frac{\text{Force}}{\text{Area}}$$

Answer 6.425 N [2]

$$5 = \frac{\text{Force}}{1.285}$$

(x1.285) (x1.285)

$$6.425 = \text{Force}$$