

10th August



Corbettmaths

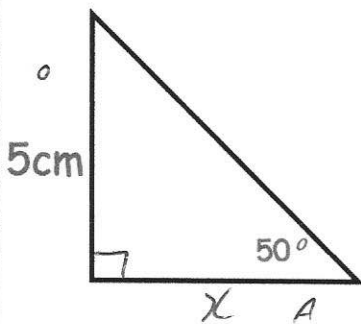
A circular plaque of diameter 8cm is cut from a square piece of metal with side length 8cm. 64cm^2

$$\pi \times 4^2 = 50.265\dots$$

$$\text{Waste} : 13.7345\dots$$

What percentage of the metal is wasted?

$$21.46\%$$



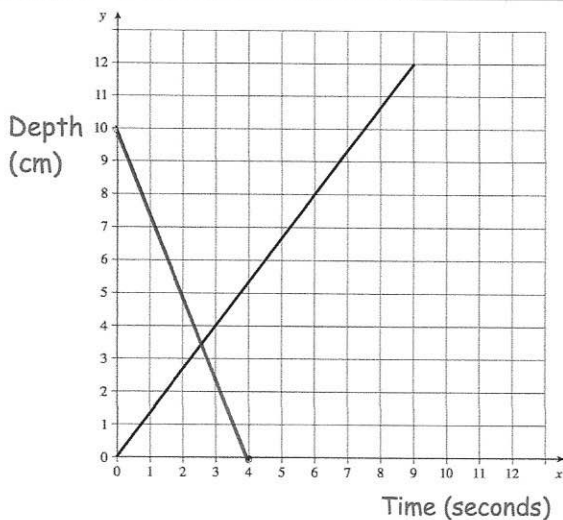
$$\tan 50^\circ = \frac{x}{5}$$

$$x = 5 \tan 50$$

$$x = 4.19549\dots$$

Calculate the area of the right angled triangle.

$$10.4888\text{cm}^2$$



Water is poured into a glass for 6 seconds. The graph shows the depth of the water in the glass.

What is the rate of change of the depth of the water?

Give your answer in cm/s.

$$\frac{4}{3} \text{ cm/s}$$

Another glass contains water that is 10cm deep.

It is emptied at a rate of 2.5cm/s.

Show this on the graph.

Shapes A, B and C are similar.
 The height of shape A is 8cm
 The height of shape C is 4cm
 The ratio of the surface area of shape B to the surface area of shape C is 25:9
 Work out the ratio of the volume of shape A to shape B.

Sides $A : B : C$
 $2 : 3$
 $5 : 3$
 $6 : 5 : 3$

Volume $216 : 125$