



Make x the subject of $A = \frac{1}{2}(x + y)$

$$2A = x + y$$

$$x = 2A - y$$

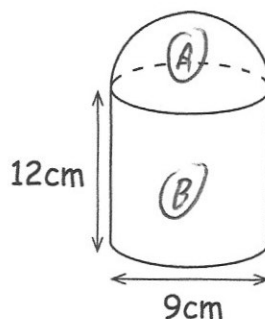
Work out $36^{\frac{1}{2}}$

$$\sqrt{36} = 6$$

A shape is made by joining a hemisphere with a cylinder.

Find the volume of the shape.

$$\begin{aligned} \textcircled{A} \quad & \frac{2}{3} \times \pi \times 4.5^3 \\ & = 190.85 \dots \text{cm}^3 \end{aligned}$$



$$\begin{aligned} \textcircled{B} \quad & \pi \times 4.5^2 \times 12 \\ & = 763.407 \dots \text{cm}^3 \\ & 954.259 \text{cm}^3 \\ & \text{to 3dp} \end{aligned}$$

Work out the values of c and d in the identity.

$$4(3x + 7) - 2(9x + c) \equiv dx + 90$$

$$12x + 28 - 18x - 2c \equiv dx + 90$$

$$-6x + 28 - 2c \equiv dx + 90$$

$$d = -6$$

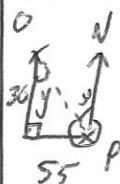
$$28 - 2c = 90$$

$$-2c = 62$$

$$c = -31$$

A boat leaves a port and sails 55km due west and then 30km due north and arrives at an oil rig.

What is the bearing of the oil rig from the port?



$$\tan y = \frac{55}{30}$$

$$y = 61.389 \dots$$

$$360 - y = 298.6^\circ$$