



Two solids are mathematically similar.
The surface area of the smaller solid is $42\pi \text{ cm}^2$
The surface area of the larger solid is $1512\pi \text{ cm}^2$

$$\sqrt{36} = 6$$

The height of the larger solid is 96cm.
Work out the height of the smaller solid.

$$96 \div 6 = 16 \text{ cm}$$

$$w = \frac{\sqrt[3]{y}}{r}$$

$$\frac{1750}{7.05} / \frac{1850}{7.15}$$

$$\text{Max } w = \frac{\sqrt[3]{1850}}{7.05}$$

$$\text{Min } w = \frac{\sqrt[3]{1750}}{7.15}$$

$$1.741278051$$

$$1.685414171$$

$y = 1800$ to 2 significant figures
 $r = 7.1$ to 1 decimal place

By considering bounds, work out the value of w to a suitable degree of accuracy

$$1.7$$

Make x the subject of

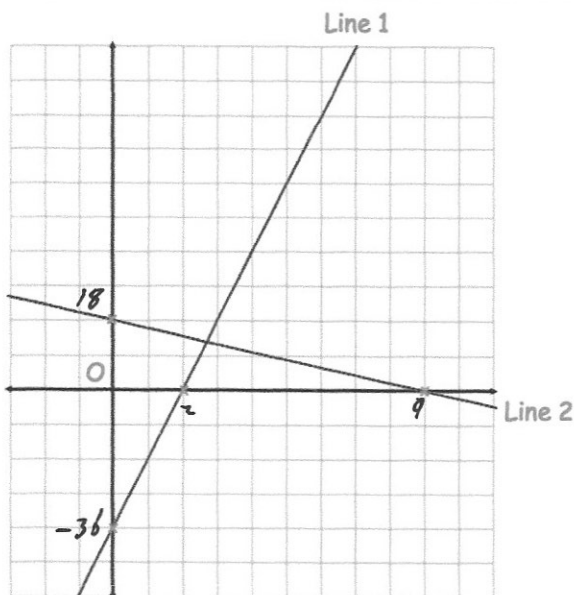
$$y = \frac{x+7}{x-3} \quad y(x-3) = x+7$$

$$xy - 3y = x+7$$

$$xy - x = 3y+7$$

$$x(y-1) = 3y+7$$

$$x = \frac{3y+7}{y-1}$$



Shown are two straight lines drawn on the grid.

Line 2 has equation $y = -2x + 18$

Find the equation of Line 1

$$y = 18x - 36$$

Are the two lines perpendicular?

If perpendicular $m_1 \times m_2 = -1$

$$-2 \times 18 = -36$$

not -1

No