23rd March

Corbettmaths

Two solids are mathematically similar.
The surface area of the smaller solid is
42π cm²
The surface area of the larger solid is
1512π cm²

$1512\pi \div 42\pi = 36$

$\sqrt{36} = 6$

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

$96 \div 6 = 16 cm$

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

Max w : 1.741278051

min w : 1.685414171

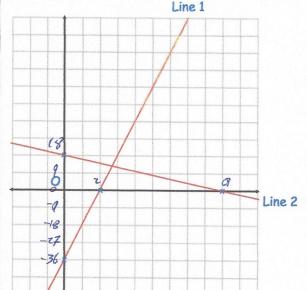y = 1800 to 2 significant figures   1850
                                      1750
r = 7.1 to 1 decimal place

        7.15
        7.05

By considering bounds, work out the
value of w to a suitable degree of
accuracy   1.7 to nearest 1dp

Make x the subject of

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

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

$xy - 3y = x + 7$

$xy - x = 7 + 3y$

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

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

Line 1

18
9
6
2
-9
-18
-27
-36

Line 2

Shown are two straight lines drawn on
the grid.
Line 2 has equation y = −2x + 18

Find the equation of Line 1

$y = 18 x - 36$

Are the two lines parallel? perpendicular?

No