Two solids are mathematically similar. The surface area of the smaller solid is $42\pi \text{ cm}^2$ and the surface area of the larger solid is $1512\pi \text{ cm}^2$. The height of the larger solid is $96\text{ cm}$. Work out the height of the smaller solid.

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

\[
y = 1800 \text{ to 2 significant figures}
\]

\[
r = 7.1 \text{ to 1 decimal place}
\]

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

Make $x$ the subject of

\[
y = \frac{x + 7}{x - 3}
\]

Shown are two straight lines drawn on the grid. Line 2 has equation $y = -2x + 18$. Find the equation of Line 1.

Are the two lines perpendicular?