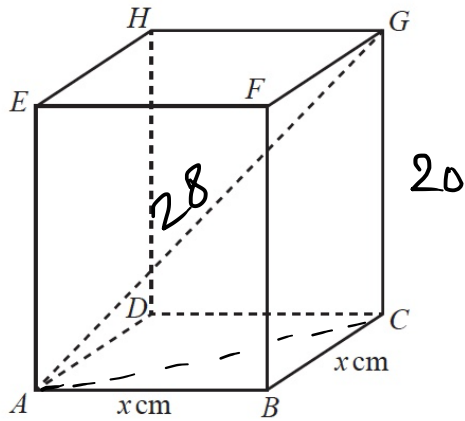


Problem 0580/42/M/J/23 Q 10a



NOT TO SCALE

$ABCDEFGH$ is a cuboid with a square base of side x cm.
 $CG = 20$ cm and $AG = 28$ cm.

Calculate the value of x .

$$\begin{aligned} AC &= \sqrt{AB^2 + BC^2} \\ &= \sqrt{x^2 + x^2} = \sqrt{2}x \end{aligned}$$

In $\triangle ACG$

$$28^2 = 20^2 + 2x^2$$

$$x = \sqrt{\frac{28^2 - 20^2}{2}}$$

$x = \dots\dots\dots 13.9$ [4]