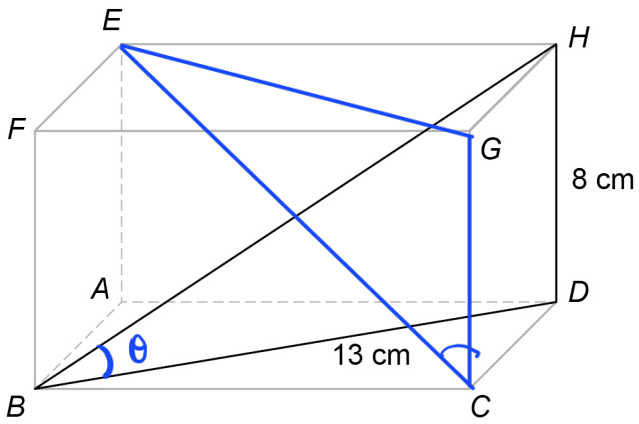
1 Here is a cuboid.

$DH = 8$ cm

$DB = 13$ cm



1 (a) Work out the size of angle DBH.

[2 marks]

$\tan\theta = \frac{8}{13}$ (1)

$\theta = \tan^{-1}\frac{8}{13}$

$= 31.6...$ (1)

Answer 31.6 degrees

1 (b) Using your answer to part (a), work out the size of angle ECG.

[1 mark]

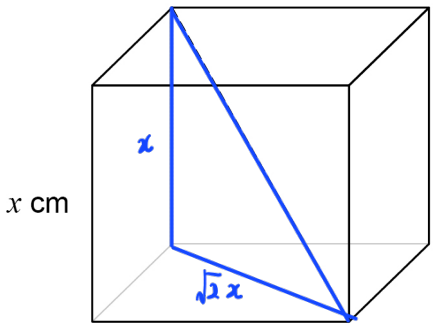
$ECG = 180 - 31.6 - 90$

$= 58.4$

Answer 58.4 (1) degrees

2 Here is a cube with edge length x cm

One diagonal is shown.



2 (a) Circle the length, in centimetres, of the diagonal. **[1 mark]**

$\sqrt{x^2 + (\sqrt{2}x)^2}$

$= \sqrt{x^2 + 2x^2}$ $= \sqrt{3x^2}$

$= \sqrt{3}\,x$

$\sqrt{3}\,x$ (1) $\sqrt[3]{3x^2}$ $\sqrt{x^3}$ $\sqrt[3]{3}\,x$

2 (b) The total length, in centimetres, of the edges of the cube is a multiple of 18

Circle the correct statement. **[1 mark]**

↳ 12 edges

$= 12x$

x is a whole number | x is not a whole number | x might be a whole number (1)