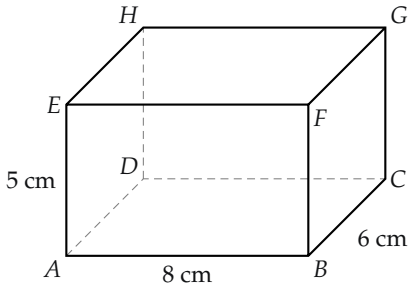
Marked example 3

Paper 2 style · Graphic display calculator

3 6 marks SL 3.1 ●●○ Typical

The diagram shows a cuboid $ABCDEFGH$ with $AB = 8$ cm, $BC = 6$ cm and $AE = 5$ cm.



(a) Find AC. **[2]**

(b) Find AG. **[2]**

(c) Find the angle between AG and the base $ABCD$. **[2]**

MARKSCHEME (a)

$AC^2 = 8^2 + 6^2$ **(M1)**

$AC = 10$ cm **A1**

Total 2 marks

MARKSCHEME (b)

$AG^2 = 10^2 + 5^2$ **(M1)**

$AG = 11.2$ cm $(\sqrt{125} = 11.1803\ldots)$ **A1**

Total 2 marks

Note Triangle ACG, right-angled at C.

MARKSCHEME (c)

$\tan\theta = \frac{5}{10}$ **(M1)**

$\theta = 26.6°$ $(26.5650\ldots)$ **A1**

Total 2 marks

Note Or $\sin\theta = \frac{5}{11.18\ldots}$.

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