

**21st January**

Corbettmaths

Write  $3x^2 - 12x + 2$  in the form  $a(x + b)^2 + c$

$$\begin{aligned} & 3[x^2 - 4x] + 2 \\ &= 3[(x-2)^2 - 4] + 2 \\ &= 3(x-2)^2 - 12 + 2 \end{aligned}$$

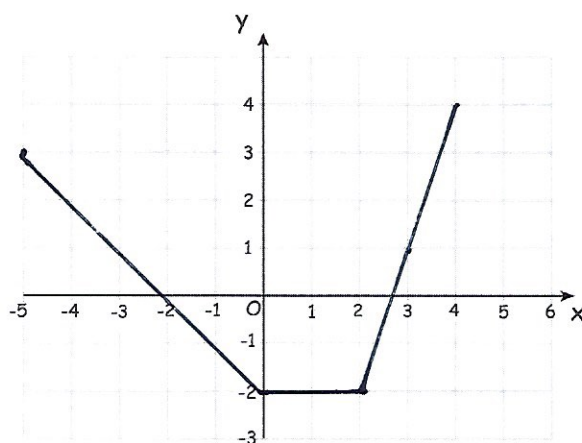
$$3(x-2)^2 - 10$$

On the grid, draw the graph of  $y = f(x)$

$$f(x) = -x - 2 \quad -5 \leq x < 0$$

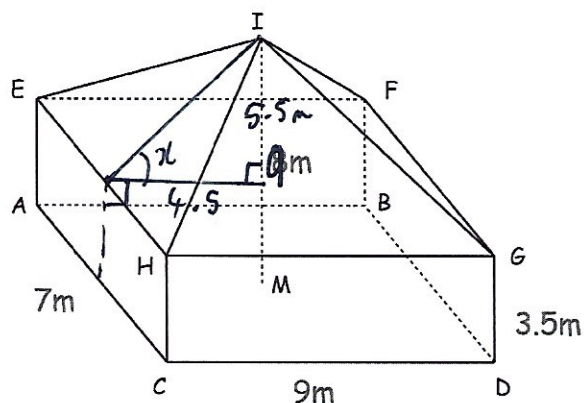
$$= -2 \quad 0 \leq x < 2$$

$$= 3x - 8 \quad 2 \leq x \leq 4$$



The diagram shows a cuboid and a pyramid.

The apex of the pyramid, I, is directly above the centre, M, of ABDC.



Calculate the angle between planes EHI and ACHE

$$\tan x = \frac{5.5}{4.5}$$

$$\tan^{-1} \frac{5.5}{4.5} = 50.71^\circ$$

$$90 + 50.71 = 140.71^\circ$$