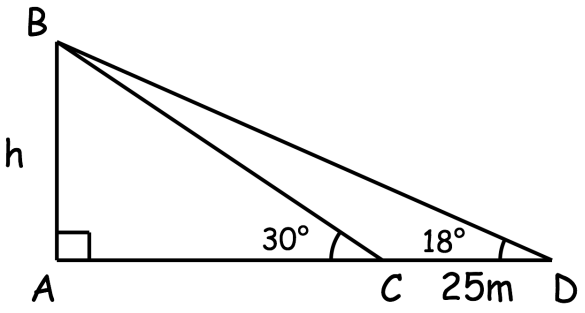
11th September **Higher Plus 5-a-day**

Corbettmaths

Prove that $(n+6)^2 - (n+1)^2$ is a multiple of 5 for all positive integer values for n.

Willow is calculating an estimate for the height of a tree, h.
A is the base of the tree and B is the top of the tree.

Willow measures the angles of elevation at points on the ground, C and D, that are 25m apart.



Work out h.

Willow realises that CD is actually 20m and not 25m.
How will that affect the value of h?

Prove that the sum of three consecutive integers is divisible by 3.

Find the minimum point of the graph

$y = x^2 + 6x + 8$