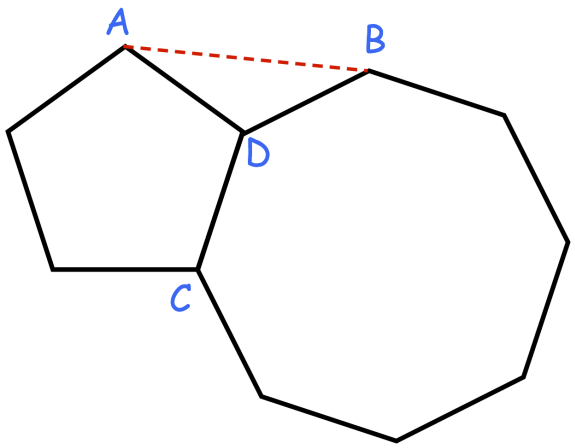
Name: _____ 5-a-day Higher Plus

5th June

Corbettmaths

A is a vertex of a regular pentagon.
B is a vertex of a regular octagon.
C and D are vertices of both polygons.



The perimeter of the octagon is 40cm.
Work out the length AB

Prove that when two consecutive integers are squared, that the difference is equal to the sum of the two consecutive integers.

The point A has coordinates (–6,0)
The point B has coordinates (0,3)
The point C has coordinates (9,–1)

Find the equation of the line that passes through C and is perpendicular to AB.

For all values of x

$f(x) = 3x + 2$ and
$g(x) = (x - 3)^2$

Find $fg(x)$

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