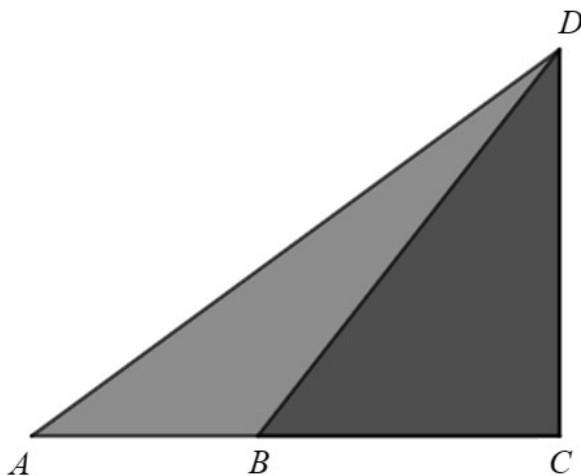# (48) Triangles (Problem Solving)

WORKING AT D/E

(1) The diagram below shows the right-angled triangle ACD where $< ACD = 90^0$. ABC and BD are both straight lines.

$AC = 7cm, BD = \sqrt{29}$ and $CD = 5cm$

(a) Find the size of $< ADB$.
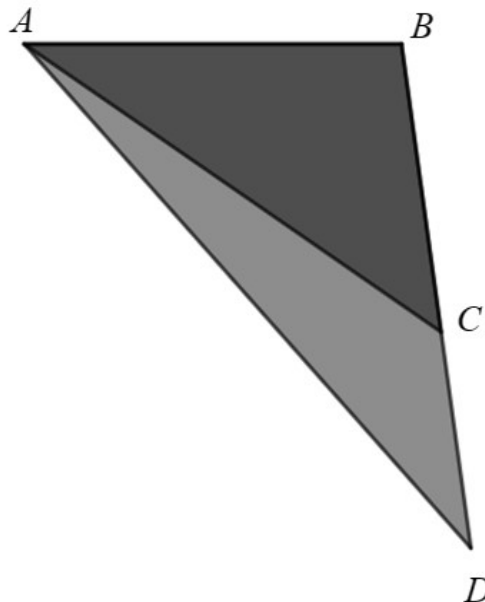
(b) Find the area of ΔADB.

(c) Find the perimeter of ΔADB to 3 SF.

WORKING AT B/C

(1) The diagram below shows the triangle ABD. BCD and AC are both straight lines.

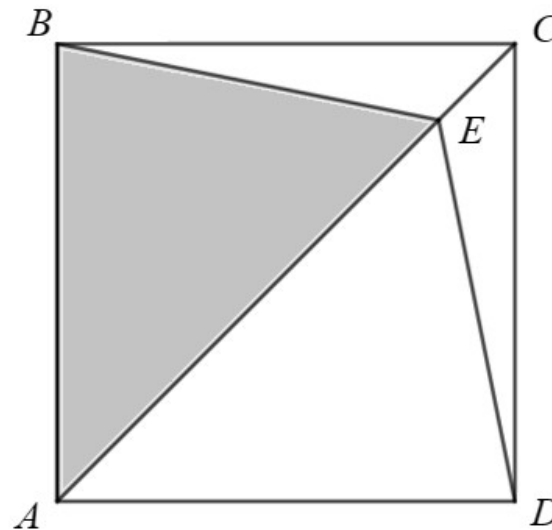$AB = 10cm, BD = 17cm, < DAC = 28^o$ and $< ABD = 93^0$

(a) Find AC to 1 decimal place.

(b) Find what proportion of ΔABD is shaded darker grey?

(c) Find the perimeter of ΔABC

WORKING AT A*/A

(1) A parallelogram has side lengths x and $2x$ and one interior angle θ. Given that the area of the parallelogram is 6 units, find the possible set of values of x.

(2) The diagram below shows a square $ABCD$ of area 36. AEC is a straight line and $CE = \sqrt{2}$.

Find the proportion of the square that is shaded giving your answer as a simplified fraction.