

## Zag Area 1

The shape can be cut up like this:

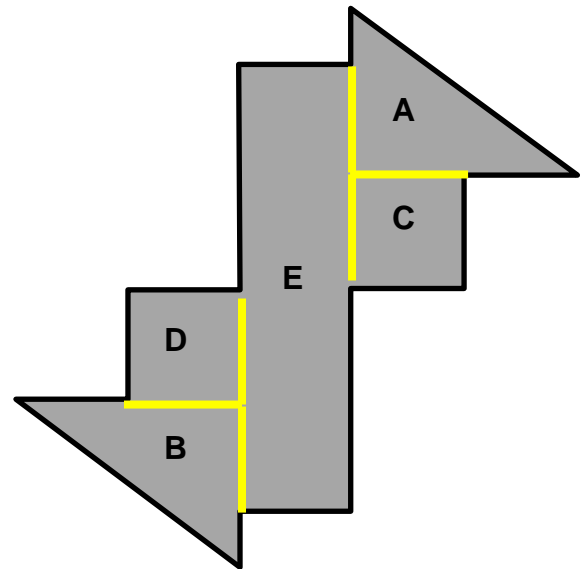
The number of grid squares that make up each shape can then be counted/calculated.

Triangles A and B can be put together to make

one rectangle made up of  $3 \times 4 = 12$  squares

C and D are each made up of  $2 \times 2 = 4$  squares

E is made up of  $2 \times 8 = 16$  squares



The overall shape covers  $12 + 4 + 4 + 16 = 36$  squares

If the length of one side of a grid square is  $x$  m, it's area is  $x^2$  m<sup>2</sup>

So  $36x^2 = 1.44$

Giving  $x^2 = 0.04$

So  $x = 0.2$  m

Each grid square has a side length of 0.2 m.

The perimeter without the two 'angled' lines is  $26 \times 0.2 = 5.2$  m (by counting square edges)

The angled sides can be calculated using Pythagoras

$$\text{Length} = \sqrt{0.6^2 + 0.8^2} = 1$$

The perimeter is therefore  $5.2 + 1 + 1 = 7.2$  m

# Further Mathematics Support Programme

