Homework
Lengths and Angles in Shapes

National Curriculum Objectives:

Mathematics Year 5: (5G2a) Use the properties of rectangles to deduce related facts and find missing lengths and angles
Mathematics Year 5: (5G4b) Identify: angles at a point and one whole turn (total 360), angles at a point on a straight line and ½ a turn (total 180) other multiples of 90°

Differentiation:

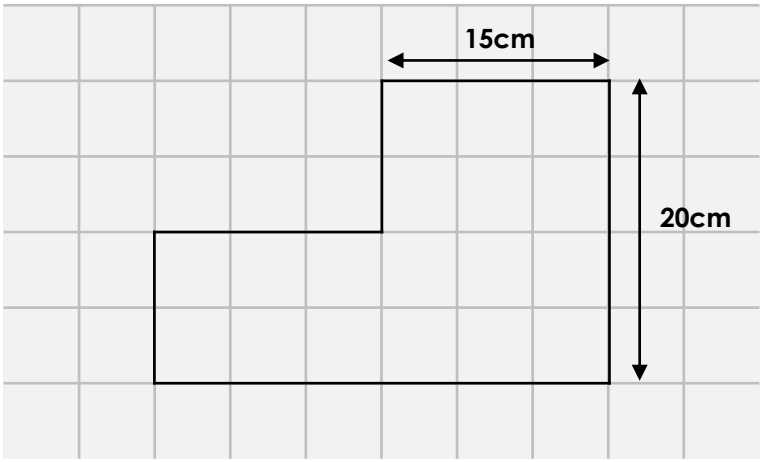
Questions 1, 4 and 7 (Varied Fluency)
Developing Calculate the perimeter of a 6 sided rectilinear shape.
Expected Calculate the perimeter of two adjoining 6 sided rectilinear shapes.
Greater Depth Calculate the perimeter of an 8 sided rectilinear compound shape.

Questions 2, 5 and 8 (Varied Fluency)
Developing Calculate the lengths and angles of a shape, including squares, rectangles and 6 sided rectilinear compound shapes.
Expected Calculate the lengths and angles of a shape, including triangles, squares, rectangles and 6 sided rectilinear compound shapes.
Greater Depth Calculate the lengths and angles of a shape, including triangles, quadrilaterals and 8 sided rectilinear compound shapes.

Questions 3, 6 and 9 (Reasoning and Problem Solving)
Developing Follow a set of instructions to draw and name a shape, including squares, rectangles and 6 sided rectilinear compound shapes.
Expected Follow a set of instructions to draw and name a shape, including triangles, squares, rectangles and 6 sided rectilinear compound shapes.
Greater Depth Follow a set of instructions to draw and name a shape, including triangles, quadrilaterals and 8 sided rectilinear compound shapes.

Lengths and Angles in Shapes

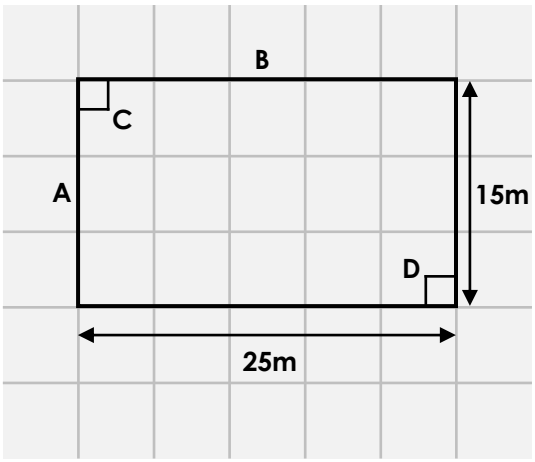
1. Calculate the perimeter of the shape.



D

VF
HW/Ext

2. Calculate the length of the sides A and B and the angles C and D in the shape below.



Side

A = _____

B = _____

Angle

C = _____

D = _____

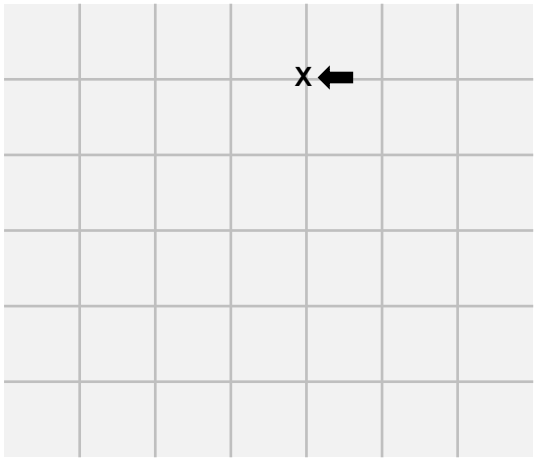
D

VF
HW/Ext

3. Starting on X, follow Jack's instructions and draw his walking route around the park.

Jack

Move forward three squares.
Turn 90° anti-clockwise.
Move forward three squares.
Turn 90° anti-clockwise.
Move forward three squares.
Turn 90° anti-clockwise.
Move forward three squares.



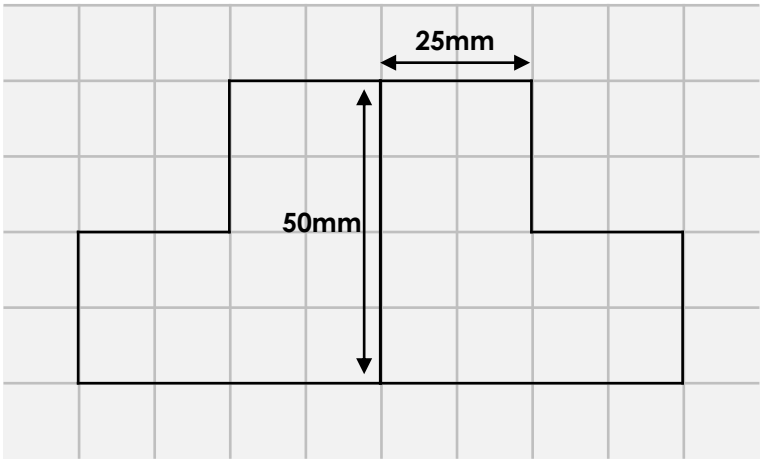
Name the shape you have drawn.

D

RPS
HW/Ext

Lengths and Angles in Shapes

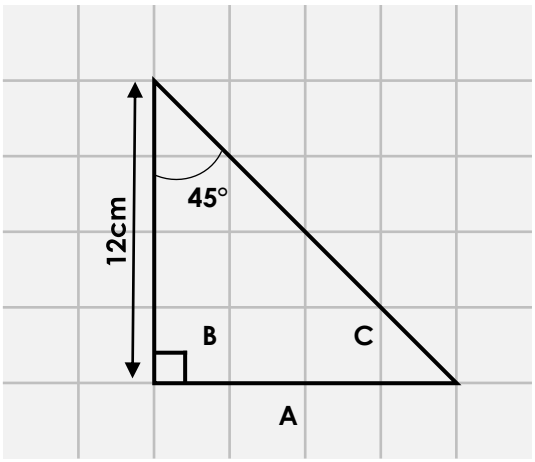
4. Calculate the perimeter of the shape.



E

VF
HW/Ext

5. Calculate the length of the side A and the angles B and C in the shape below.



Side

A = _____

Angle

B = _____

C = _____

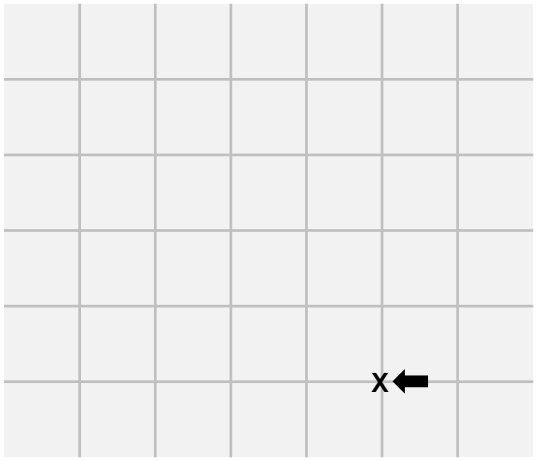
E

VF
HW/Ext

6. Starting on X, follow Ellie's instructions and draw her walking route around the park.

Ellie

Move forward four squares.
Turn 90° clockwise.
Move forward four squares.
Turn 135° clockwise.
Move diagonally through four squares.



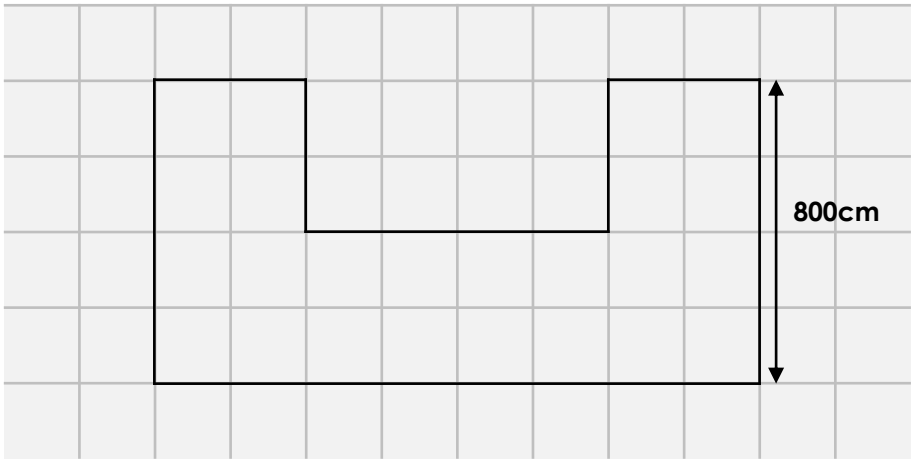
Name the shape you have drawn.

E

RPS
HW/Ext

Lengths and Angles in Shapes

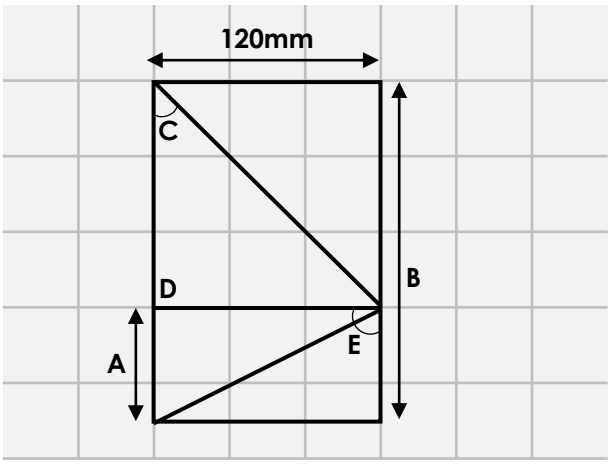
7. Calculate the perimeter of the shape.



GD

VF
HW/Ext

8. Calculate the length of the sides A and B in centimetres and the angles C, D and E in the shape below.



Side

A = _____

B = _____

Angle

C = _____

D = _____

E = _____

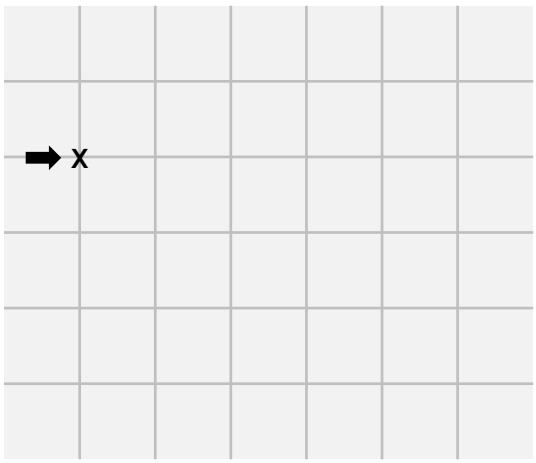
GD

VF
HW/Ext

9. Starting on X, follow Ciara's instructions and draw her walking route around the park.

Ciara

Move forward two squares.
Turn 45° clockwise.
Move diagonally through three squares.
Turn 135° clockwise.
Move forward through five squares.
Turn 90 ° clockwise.
Move forward three squares.



Name the shape you have drawn.

GD

RPS
HW/Ext

Homework
Lengths and Angles in Shapes

Developing

1. 100cm.
2. A = 15m; B = 25m; C and D are 90°
3. The shape drawn is a square.

Expected

4. 300mm or 30cm.
5. A = 12cm; B = 90°; C = 45°
6. The shape drawn is a right angled triangle.

Greater Depth

7. 56m or 5,600cm.
8. A = 6cm; B = 18cm. C is 45°; D is 90°; E is 90°.
9. The shape drawn is a trapezium.