

Worksheet 3

Theme: Mystery Geometry Investigation

Name:

Class:

Section 1: Crime Scene Coordinates

The thief ran in a path plotted on a grid:

$A(1,1) \rightarrow B(1,5) \rightarrow C(5,5) \rightarrow D(5,1)$

1. What shape did the thief run around?
2. Calculate the **area** and **perimeter** of this path.



Section 2: Angle Traps

You found a booby-trap drawn on the floor. The angles inside a shape total **540°**.

1. How many sides does this polygon have?
2. Name the polygon.

Hint: Use the formula for interior angles: $(n-2) \times 180$



Section 3: Footprint Clue – Scale Drawing

A footprint is 4 cm on a map. The real foot measures 32 cm.

1. What is the **scale**?
2. If the shoe print was triangular, how could you estimate the area of the actual print?



Section 4: The Code is in the Volume

A locked safe is shaped like a **cube** with side = 6 inches.

- What's the **volume** of the cube?
- If you hollow out a smaller cube (side = 3 inches), what volume remains?



Draw a "**safehouse**" using polygons and label its dimensions. Use a combination of shapes to find the total **area** of the floorplan.