

Max's Garden Geometry Challenge

Learning objective: Calculate the area and perimeter of rectilinear shapes and compound shapes using cm and m.

Max the monkey is helping his friends design vegetable plots for their school garden. Use your knowledge of area (measured in cm^2 or m^2) and perimeter (measured in cm or m) to solve these problems. For each question, show your working out clearly.

Word bank: Area · Perimeter · Rectilinear · Square · Rectangle · Length · Width · Calculation

1. Pip the caterpillar wants a square patch for his lettuce. Each side is 4 metres long. What is the area of his patch, and what is the total perimeter he needs to fence off? (2 marks)

2. Zara the zebra is designing a rectangular flower bed that is 6 metres long and 3 metres wide. What is the area of this bed? (2 marks)

3. A compound shape is made of two rectangles joined together. Rectangle A is 2cm by 5cm, and Rectangle B is 3cm by 3cm. What is the total area of the combined shape? (2 marks)

4. If a path around a garden has a perimeter of 24 metres and is a perfect square, how long is each side of the path? (2 marks)

5. True or False: If you double the length and width of a rectangle, the area also doubles. Explain your reasoning using a small example. (2 marks)

Draw: Draw a compound rectilinear shape on a grid and label the sides. Then, calculate its total area and perimeter to show Max the monkey how you solved it.



Extension challenge: Design a garden layout for the BookFlik characters with a total area of exactly 50 square metres. Include at least two different shapes for the plots and label the dimensions of each.