

Max's Garden Geometry Challenge

Learning objective: To calculate the perimeter and area of rectilinear shapes by counting squares and using multiplication.

Max the monkey is planning a new vegetable patch in his garden. He has drawn his designs on squared paper. Each square on the grid represents 1 metre squared (1m^2). Help Max solve these puzzles by counting the squares for the area and counting the outer edges for the perimeter. For each shape, write down the area (number of squares) and the perimeter (total length of the boundary in metres).

Word bank: Area · Perimeter · Rectilinear · Square metres · Boundary · Multiplication · Length · Width

1. Max draws a rectangle that is 4 squares long and 3 squares wide. What is the area in m^2 and the perimeter in metres? (2 marks)

2. Max decides to add a small square patch for carrots that is 2m by 2m. What is the area of this carrot patch? (2 marks)

3. If Max builds a fence around a rectangular patch with a length of 6m and a width of 2m, how many metres of fencing will he need for the perimeter? (2 marks)

4. A new plot is shaped like an 'L'. It is 5m long and 3m wide, with a smaller 2m by 2m section attached. Calculate the total area. (2 marks)

5. Max wants to buy compost. Each bag covers 4m^2 . If his garden area is 12m^2 , how many bags does he need to buy? (2 marks)

Draw: Draw a rectilinear shape on squared paper that has an area of exactly 10 squares and a perimeter of 14 metres.



Extension challenge: Max wants to build a path around his garden. If the garden is 5m by 4m, and the path is 1m wide all the way around the outside, what would the new total perimeter be?