

Max's Spooky Calculation Celebration

Learning objective: To apply mathematical reasoning to perimeter, area, and multi-step word problems within a thematic context.

Follow Max the Monkey's instructions to design his spooky garden display. Use your ruler to ensure accuracy and label your mathematical findings clearly.

Draw: Draw a top-down 'bird's-eye view' map of Max's spooky garden. Include: 1) A rectangular pumpkin patch labelled with its dimensions (8m x 5m). 2) A square shed in the top-left corner. 3) A path that forms a rectilinear shape. 4) Use a ruler to draw these shapes precisely. Decorate the garden with spooky elements like stars or bats, ensuring any decorative elements have at least one line of symmetry.



Label words: Perimeter · Area · Quadrilateral · Rectilinear · Dimensions · Symmetry · Vertex · Parallel

Steps:

1. Max is designing a rectangular pumpkin patch with a length of 8 metres and a width of 5 metres. Calculate the perimeter of the patch. Show your working out.
2. The pumpkin patch needs a decorative fence that costs £4.50 per metre. Calculate the total cost to fence the entire perimeter.
3. Max wants to place a square 'spooky' shed in the corner of his garden. If the shed has an area of 16m^2 ,

what is the length of one side? Justify your answer.

4. If Max decides to double the length and the width of his original pumpkin patch, what happens to the total area? Explain your reasoning.

5. Draw a small, symmetrical bat shape on your scene. Explain why you chose to draw it with a line of symmetry.

6. Max buys 3 bags of spooky sweets for £2.25 each and a decorative lantern for £6.50. He pays with a £20 note. Calculate his change.