

# Year 6 Geometry Assessment: Shapes, Angles, and Coordinates

*Learning objective: To demonstrate understanding of 2D and 3D shapes, angle calculation, and plotting coordinates in all four quadrants.*

Read each question carefully. Show your working out where possible. Use a ruler for all drawing tasks.

Max the monkey is helping his friends organise their adventure equipment. He needs to map out their base camp using coordinates and ensure all their triangular tents are set up with the correct angles to stay steady in the wind.

*Word bank: vertically opposite · quadrant · translation · reflection · isosceles · protractor · parallel · perpendicular*

**1. Max plots the base camp at coordinates (2, 3). He moves the camp 4 units right and 3 units down. What are the new coordinates of the base camp? (2 marks)**

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**2. A triangle has two equal sides and one angle measuring 40 degrees. What is the name of this type of triangle? Calculate the size of the other two angles. (3 marks)**

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**3. Explain the rule for calculating the missing angle when two straight lines intersect, involving vertically opposite angles. (3 marks)**

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**4. A cuboid has a length of 5cm, a width of 3cm, and a height of 2cm. Calculate the volume of the cuboid. Include the correct units. (2 marks)**

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**5. Draw a shape on a coordinate grid that has at least one pair of parallel sides and one pair of perpendicular sides. Label the coordinates of the vertices. (4 marks)**

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6. Max says: 'If I reflect a shape across the y-axis, the coordinates of the x-axis change, but the y-axis remains the same.' Is Max correct? Explain your answer using a coordinate example. (6 marks)

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7. Write a short guide for a younger student explaining how to use a protractor to measure an obtuse angle correctly. Include three clear steps. (5 marks)

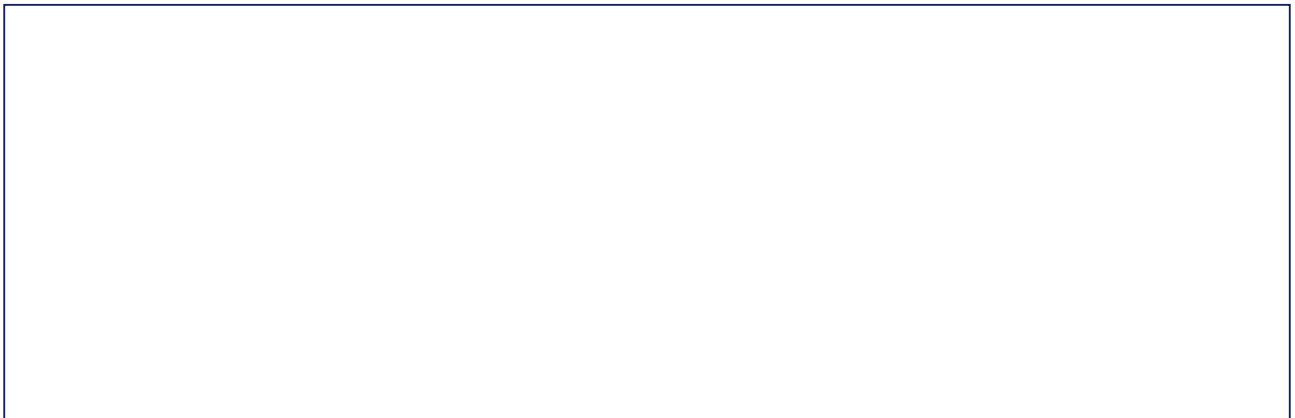
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Draw: Sketch a net of a square-based pyramid and label the faces, edges, and vertices. \_\_\_\_\_



*Extension challenge: Total: /25*