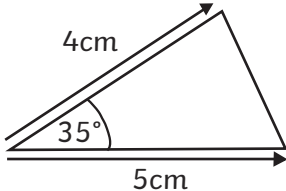
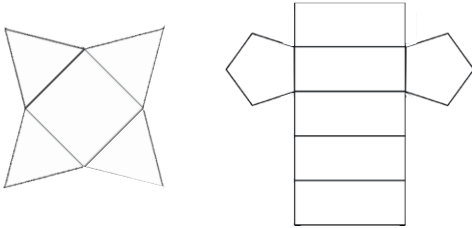
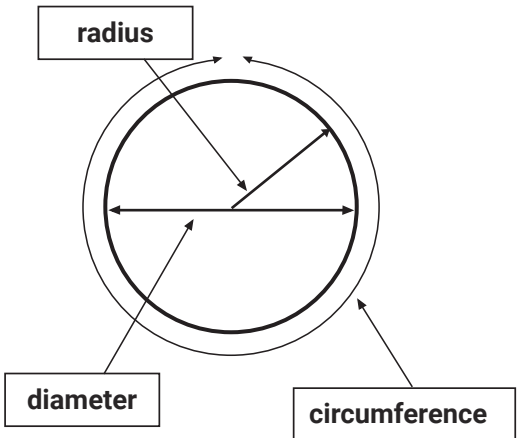


		Answer	Assessment Focus	Possible Misconceptions
1.	2 marks 1 mark for (a) 1 mark for all shapes correctly named in (b)	<p>It has 8 vertices and 12 edges</p> <p>It has 9 edges and 5 faces.</p> <p>It has 8 faces and 18 edges.</p> <p>It has 5 vertices and 8 edges.</p> <p>triangular prism</p> <p>cube</p> <p>square-based pyramid</p> <p>hexagonal prism</p> <p>Allow inaccuracies in the spellings of shape names if the intention is clear.</p>	Recognise and name 3D shapes and classify them based on their properties.	<p>Children may struggle to remember the meaning of some common vocabulary associated with 3D shapes, including edges, faces, vertices and bases.</p> <p>They may not be able to visualise the number of edges, vertices and faces a 3D shape has based on a picture of that shape.</p> <p>Children may also struggle to remember the names of 3D shapes.</p>
2	1 mark 1 mark for a rectangle with a perimeter of 14cm drawn in any orientation		Draw a rectangle with a given perimeter.	<p>Children may not understand the term 'perimeter' or how to draw a shape with a given perimeter.</p> <p>They may also be confused by the concepts of area and perimeter so may draw a rectangle with an area of 14cm², rather than with a perimeter of 14cm.</p>
3	1 mark	$y = 63^\circ$	Use known angles facts to find unknown angles in a triangle.	Children may not be able to find unknown angles in a triangle by using facts such as the right angle in a right-angled triangle measures 90° and the angle sum of a triangle equals 180°.

		Answer	Assessment Focus	Possible Misconceptions and Interventions
4	1 mark		Draw a triangle using given dimensions and angles.	Children may find it difficult to draw angles and lines of a given size. They may struggle to construct a triangle when only given the dimensions and an angle.
5	1 mark	$z = 132^\circ$	Use known angles facts to find unknown angles in a quadrilateral.	Children may not be able to find unknown angles in a quadrilateral by using facts such as the right angle measures 90° and the angle sum of a quadrilateral equals 360° .
6	2 marks 1 mark for each correctly completed net	 <p>If the nets drawn do not match the pictures above, award the mark if the nets drawn would still build a complete square-based pyramid and/or pentagonal prism.</p>	Build simple 3D shapes, including making nets.	Children may find it difficult to visualise the 2D shapes required when building the net of a 3D shape. They may struggle to visualise what orientation and layout the nets need to be in order for them to be correctly constructed into a 3D shape.
7	2 marks 1 mark for each correct answer	$a = 108^\circ$ $b = 72^\circ$	Use known angles facts to find unknown angles in a regular polygon. Find missing angles by recognising angles on a straight line measure 180° .	Children may not be able to find unknown angles in a regular pentagon by using the fact that all angles in a regular polygon are equal. They may find it difficult to use the fact that angles on a straight line equal 180° to find missing angles on a straight line.

		Answer	Assessment Focus	Possible Misconceptions and Interventions
8	2 marks 1 mark for (a) 1 mark for (b)	<p>a) Angle q measures 37°</p> <p>True because q is opposite the 37° angle and (vertically) opposite angles are equal.</p> <p>b) Angle r measures 145°</p> <p>False as angle r and the 37° angle are on a straight line and angles on a straight line add up to 180°. $180^\circ - 37^\circ = 143^\circ$</p>	<p>Recognise angles that are vertically opposite are equal in size. Use this fact to find missing angle measurements.</p> <p>Find missing angles by recognising angles on a straight line measure 180°.</p>	<p>Children may not remember that vertically opposite angles are equal in size and so may be unable to use this fact to find missing angles.</p> <p>They may find it difficult to use the fact that angles on a straight line equal 180° to find missing angles on a straight line.</p>
9	1 mark	 <p>The diagram shows a circle with a center point. A radius is drawn from the center to the inner edge of the circle, labeled 'radius'. A diameter is drawn through the center from the left edge to the right edge, labeled 'diameter'. The circumference is the outer boundary of the circle, labeled 'circumference'.</p>	<p>Illustrate and name parts of circles, including radius, diameter and circumference.</p>	<p>Children may not remember or may confuse the names of the different parts of a circle.</p>
10	1 mark	17cm	<p>Understand that the diameter of a circle is twice the radius.</p>	<p>Children may not remember that the diameter of a circle is twice the radius.</p> <p>They may struggle to double a decimal number to find the final diameter.</p>

Year 6 Properties of Shapes

End-of-Strand Assessment

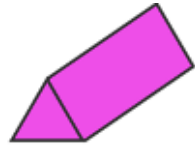
A ruler and a protractor are required.

Name: _____ Date: _____

1. a) These children are thinking of different 3D shapes. Draw lines to match each shape to the correct description.



It has 8 vertices and 12 edges.





It has 9 edges and 5 faces.





It has 8 faces and 18 edges.





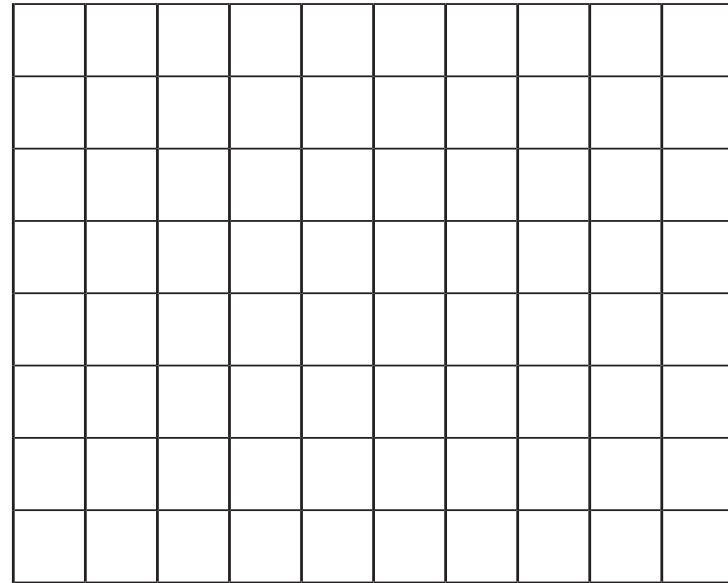
It has 5 vertices and 8 edges.



- b) Write the names of the shapes on the answer line given under each shape.

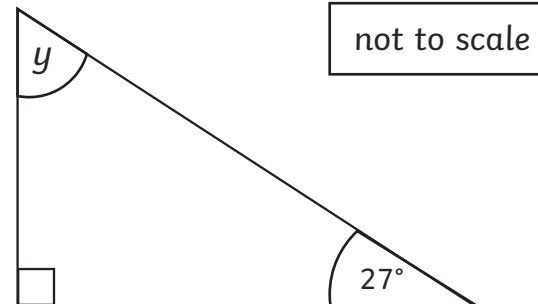
2 marks

2. Use the squared paper below to draw a rectangle with a perimeter of 14cm.



1 mark

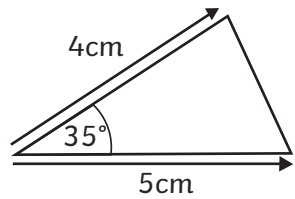
3. Calculate the size of angle y . Do not use a protractor.



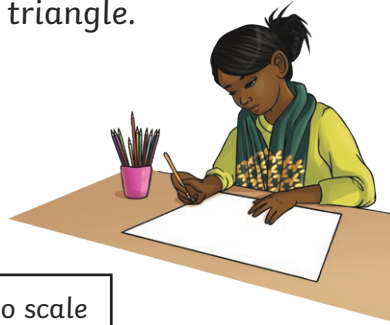
$y =$ _____

1 mark

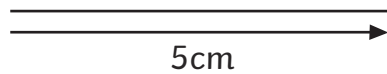
4. Rasha draws the following triangle.



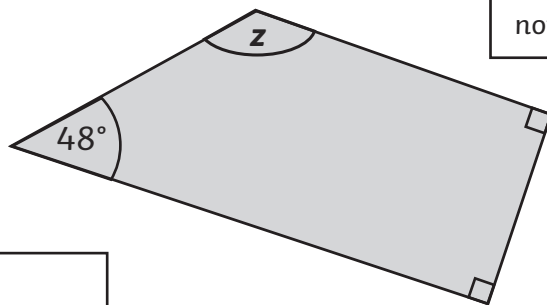
not to scale



Use a protractor and ruler to draw a full-sized version (to scale) of Rasha's triangle. The first line has been drawn for you.



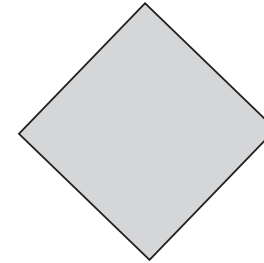
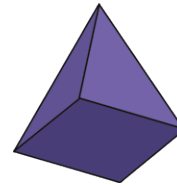
5. Calculate the size of angle z . Do not use a protractor.



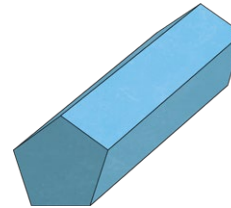
not to scale

$z =$

6. Oscar has started to draw nets for these 3D shapes. Complete the net for each shape.



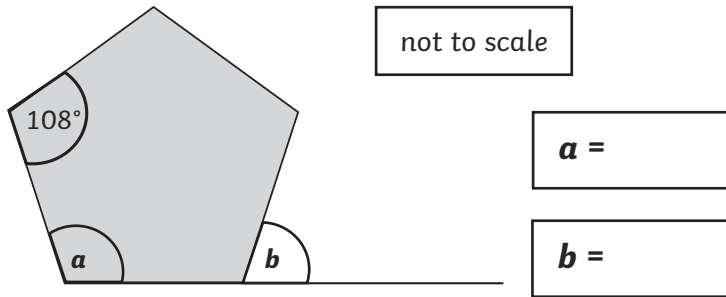
1 mark



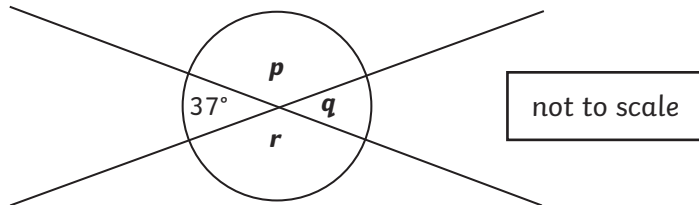
1 mark

2 marks

7. Amelia calculated that an interior angle from this regular pentagon measures 108° . Use this fact to help you find the sizes of angles a and b .



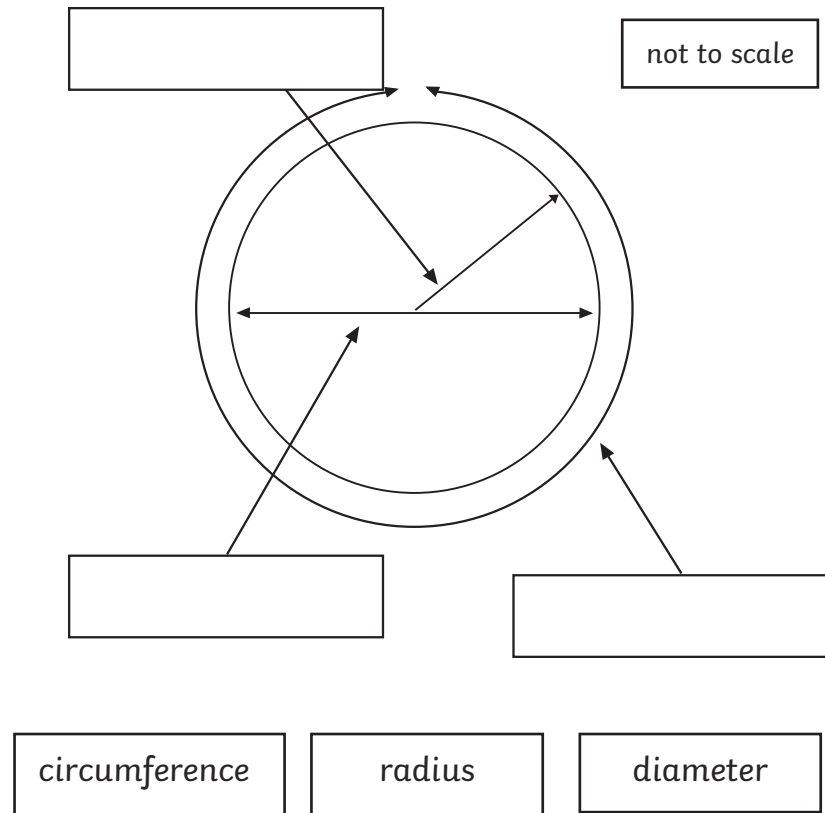
8. Decide if each statement is true or false. Explain your answer fully.



a) Angle q measures 37° .

b) Angle r measures 145° .

9. Use the words given below to complete the labels showing the different parts of a circle.



10. The radius of the circle above measures 8.5cm. What does the diameter of the same circle measure?

cm

2 marks

1 mark

1 mark

2 marks

Total 14 marks