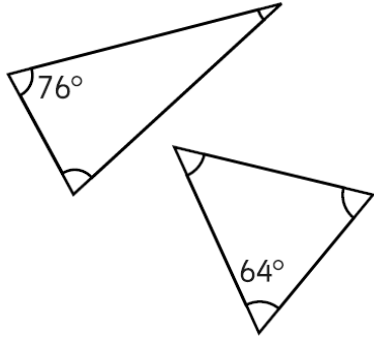


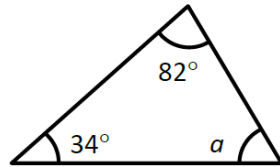
## Geometry- Shape

Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons.

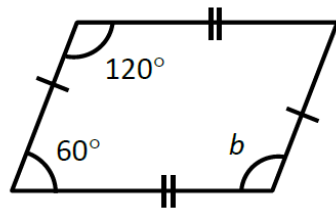
- Find the missing angles in the isosceles triangles.



- Find the missing angle.



- What is angle b?



- If one angle in an isosceles triangle is  $42^\circ$ , what might the triangle look like?

Draw it.

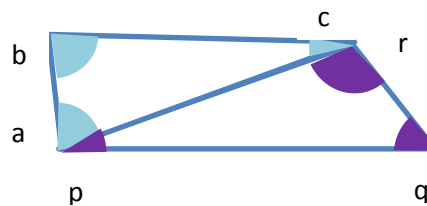
Are there any other possibilities?

- Tom says:

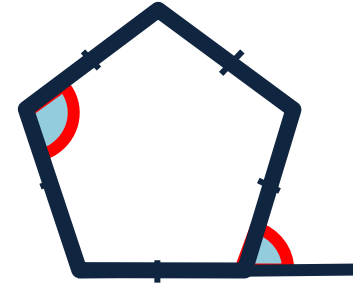
All quadrilaterals have at least one right angle.

Draw two different shapes to prove Tom wrong. Measure and mark on the angles.

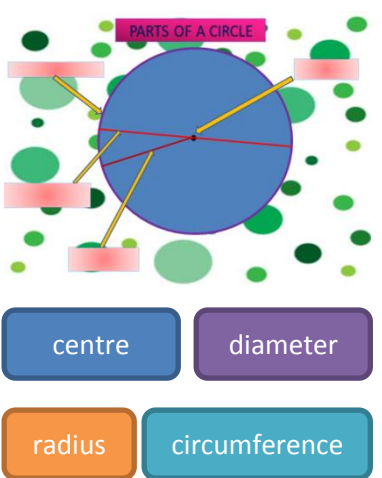
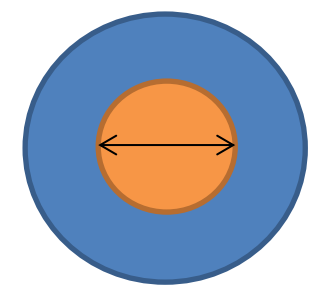
- This quadrilateral is split into two triangles. What is  $a + b + c$ ? What is  $p + q + r$ ? Use this to explain why the sum of the interior angles of the quadrilateral is  $360^\circ$



- The interior angles of a pentagon add up to  $540^\circ$ . Use this fact to find the missing angles in the diagram below.



- Use your knowledge of properties of shapes to say whether the following statements are true or false.
  - A parallelogram with a right angle is a rectangle.
  - A trapezium with a right angle is a rectangle.
  - A rectangle with equal sides is a square.
  - Every kite is also a rhombus.
- Sara is thinking of a quadrilateral. Think of three questions that you could ask Sara to work out what kind of quadrilateral she is thinking of. She can only answer yes or no.

	National Curriculum Statement	All students		
		Fluency	Reasoning	Problem Solving
Circles	<p>Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.</p>	<ul style="list-style-type: none"> <li>Label the diagram below using the labels provided.</li> </ul>  <ul style="list-style-type: none"> <li>Use the radius of the circles to find the diameter:               <ol style="list-style-type: none"> <li>5cm</li> <li>3cm</li> <li>9cm</li> </ol> </li> <li>Use the diameter of the circles to find the radius:               <ol style="list-style-type: none"> <li>10cm</li> <li>12cm</li> <li>20cm</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>Complete the statement: The ..... of a circle = 2 × the ..... of a circle.</li> </ul> <p>Draw a circle to prove the statement you have written.</p> <ul style="list-style-type: none"> <li>Kainat says,</li> </ul> <div style="border: 1px solid blue; border-radius: 15px; padding: 10px; background-color: #4a7ebb; color: white; text-align: center;"> <p>“The bigger the radius of a circle, the bigger the diameter.”</p> </div> <p>Do you agree? Explain your reasoning.</p>	<ul style="list-style-type: none"> <li>Here are 2 circles. Circle A is orange, Circle B is blue. The diameter of Circle A is <math>\frac{3}{4}</math> the diameter of Circle B.</li> </ul>  <ol style="list-style-type: none"> <li>If the diameter of Circle A is 6cm, what is the diameter of Circle B?</li> <li>If the diameter of Circle A is 6cm, what is the radius of Circle B?</li> <li>If the diameter of Circle B is 16cm, what is the diameter of Circle A?</li> <li>If the diameter of Circle B is 16cm, what is the radius of Circle A?</li> </ol>