

Check out

You should now be able to ...

✓ Calculate and use the angle properties of polygons.	6	1 - 3
✓ Use the properties of a circle to calculate angles.	6	4
✓ Calculate an arc length and sector area of a circle.	7	5, 6
✓ Recognise congruent shapes.	8	7

Test it

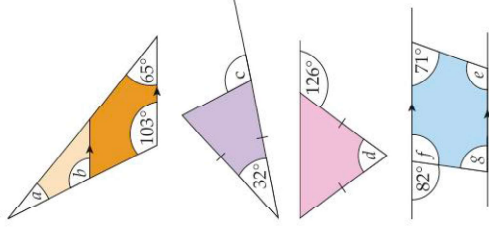
Questions



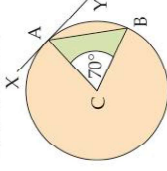
Language Meaning

Proof	A set of mathematical statements that prove a rule is true in all cases.	Example $2n$ is always even for all integer values of n so $2n + 1$ must always be odd
Circle	A set of points equidistant from the centre O .	
Chord	A straight line across the circle.	
Tangent	A line that touches the outside of a circle.	
Circumference	The edge of a circle.	
Arc	Part of the circumference.	
Sector	A region of the circle enclosed by two radii and an arc.	
Congruent Congruence	Two shapes are congruent when they are the same shape and size.	

1 Calculate the value of the angles denoted by letters. Explain which geometric facts you use.



4 C is the centre of the circle and XY is the tangent at A.

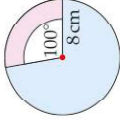


Calculate the size of angles

- a CAB b ABC c BAY

5 For this circle, calculate

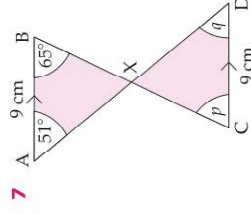
- a the arc length b the area of the sector
Give your answers as fractions in terms of π .



6 The area of a semi-circle is 95 cm^2 . Calculate its radius. Give your answer to 2 dp.

2 Calculate the exterior and interior angle of
a a regular hexagon
b a regular 18-sided polygon.

3 The exterior angle of a regular polygon is 8° . Calculate
a the number of sides
b the size of one interior angle
c the sum of the interior angles
d the number of lines of symmetry
e the order of rotation symmetry of the polygon.



- a Calculate angles p and q .
b Is triangle ABX similar or congruent to triangle CXD?

What next?

Your knowledge of this topic is still developing. To improve look at Formative test: 1080, 1100, 1109, 1148, 1320 and 1952
You are gaining a secure knowledge of this topic. To improve look at InvisiPen: 317, 346, 347, 348 and 354
You have mastered this topic. Well done, you are ready to progress!

Score

1 - 3	4 - 6	7
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