FOUNDATION & HIGHER

SAME AT BOTH TIERS

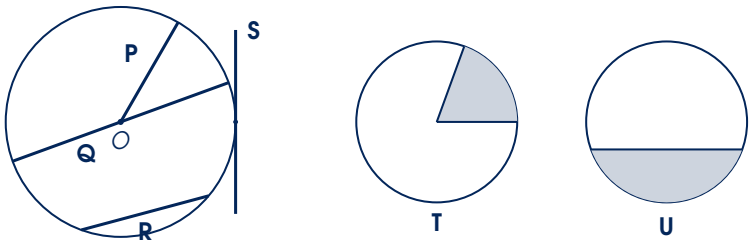
Name ..... Class .....

G9: Parts of a circle

Centre, radius, chord, diameter, circumference, tangent, arc, sector and segment

20 marks · 25 minutes · Non-calculator

1) Name each labelled part of a circle. (In the last two circles, the shaded region is labelled.)



P		S	
Q		T	
R		U	

[Question 1: 6 marks]

2) A circle has a radius of 7 cm. What is its diameter?

..... cm

[Question 2: 1 marks]

3) A circle has a diameter of 9.6 cm. What is its radius?

..... cm

[Question 3: 1 marks]

4) What is the circumference of a circle?

.....

[Question 4: 1 marks]

5) What is the angle between a tangent and the radius at the point where they meet?

..... °

[Question 5: 1 marks]

6) True or false: a minor arc is less than half of the circumference.

.....

[Question 6: 1 marks]

7) What is the name of a chord that passes through the centre of a circle?

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[Question 7: 1 marks]

8) How many tangents can be drawn to a circle from a point outside it?

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[Question 8: 1 marks]

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9) True or false: the two tangents drawn from a point outside a circle are equal in length.

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[Question 9: 1 marks]

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10) What is the name of a sector with an angle of 180°?

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[Question 10: 1 marks]

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11) A circle has centre O and radius 5 cm. Chord AB is 8 cm long. Find the distance from O to the midpoint of AB.

..... cm

[Question 11: 2 marks]

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12) A circle has a diameter of 10 cm. Can it have a chord of length 12 cm? Give a reason.

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[Question 12: 1 marks]

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13) Point P is 13 cm from the centre of a circle with radius 5 cm. Find the length of a tangent from P to the circle.

..... cm

[Question 13: 2 marks]

End of paper – 20 marks in total

Answers and brief mark scheme

Q	Answer	Method / notes
1	P radius, Q diameter, R chord, S tangent, T sector, U segment	B1 each.
2	14	B1.
3	4.8	B1.
4	The distance around the circle (its perimeter)	B1.
5	90	B1.
6	True	B1.
7	Diameter	B1.
8	2	B1.
9	True	B1.
10	Semicircle	B1.
11	3	Half chord 4 (M1); $\sqrt{25-16}$ (A1).
12	No, the diameter is the longest chord	B1.
13	12	Right angle at the tangent point (M1); $\sqrt{169-25}$ (A1).