Intersecting chords

Grade 8 | Higher | 10 questions, 29 marks

GCSE Maths topic practice

Scan for the solutions

Name: _____ **Date:** _____ **Score:** _____ **/ 29**

1 Chords AB and CD of a circle cross at the point X inside the circle.

AX = 3 cm, XB = 8 cm and CX = 4 cm.

Work out the length of XD.

(2 marks)

Answer _____

2 Chords AB and CD of a circle cross at the point X inside the circle.

AX = 5 cm, XB = 6 cm and XD = 4 cm.

Work out the length of CX.

(2 marks)

Answer _____

3 Chords AB and CD of a circle, when extended, meet at the point P outside the circle. The points P, A, B lie in that order on one straight line and the points P, C, D lie in that order on the other.

PA = 4 cm, PB = 10 cm and PC = 5 cm.

Work out the length of PD.

(2 marks)

Answer _____

4 Chords AB and CD of a circle, when extended, meet at the point P outside the circle. The points P, A, B lie in that order on one straight line and the points P, C, D lie in that order on the other.

PA = 3 cm, PB = 14 cm and PD = 12 cm.

Work out the length of PC.

(2 marks)

Answer _____

Free for classroom and home use: print, photocopy and share. Not for resale or re-hosting.

5 Chords AB and CD of a circle, when extended, meet at the point P outside the circle. The points P, A, B lie in that order on one straight line and the points P, C, D lie in that order on the other.

PA = 5 cm, AB = 7 cm and PC = 4 cm.

Work out the length of the chord CD.

(3 marks)

Answer _____

6 A circular pond has four gates, A, B, C and D, on its edge.

A straight path from gate A to gate B and a straight path from gate C to gate D cross each other at the point X on the pond.

AX = 9 m, XB = 10 m and CX = 6 m.

Work out the total length of the path from C to D. Give your answer in metres.

(3 marks)

Answer _____

7 AB is a diameter of a circle. The chord CD crosses AB at the point X.

AX = 3 cm, CX = 4 cm and XD = 9 cm.

a. Work out the length of XB.

b. Work out the radius of the circle.

(3 marks)

Answer _____

8 Chords AB and CD of a circle cross at the point X inside the circle.

$AX = x$ cm, $XB = (x + 3)$ cm, CX = 2 cm and XD = 9 cm.

Find the value of x.

(4 marks)

Answer _____

Free for classroom and home use: print, photocopy and share. Not for resale or re-hosting.

9 The straight lines AB and CD meet at the point P. The points P, A, B lie in that order on one of the lines and the points P, C, D lie in that order on the other.

PA = 5 cm, AB = 7 cm, PC = 6 cm and PD = 10 cm.

Lina says that the four points A, B, C and D all lie on the same circle.

Is Lina correct? You must show your working.

(3 marks)

Answer _____

10 Chords AB and CD of a circle, when extended, meet at the point P outside the circle. The points P, A, B lie in that order on one straight line and the points P, C, D lie in that order on the other.

PA = 3 cm, AB = 9 cm, PC = x cm and CD = (x + 1) cm.

Work out the length of PD.

(5 marks)

Answer _____

End of questions | Total 29 marks

Free for classroom and home use: print, photocopy and share. Not for resale or re-hosting.