Angles at the centre and circumference

6 questions | 13 marks

Equivalent correct methods earn the corresponding marks.

1. Minor central angle AOB is 84°. C lies on the major arc AB. Find ∠ACB. [2 marks]

Same minor arc:84/2=42.

Answer: 42°

2. ∠ACB=37° subtends minor arc AB. Find the corresponding minor central angle. [2 marks]

Double 37.

Answer: 74°

3. Minor central angle AOB is 120°. D lies on the minor arc AB. Find ∠ADB. [2 marks]

Opposite arc is major:360−120=240.

240/2=120.

Answer: 120°

4. C and D lie on the same arc of chord AB. ∠ACB=46°. Find ∠ADB. [2 marks]

They are angles in the same segment.

Answer: 46°

5. AB is a diameter of a circle and C is another point on the circle. ∠CAB=32°. Find ∠ABC. [2 marks]

∠ACB=90°.

180−90−32=58.

Answer: 58°

6. An inscribed angle subtends a chord and is 90°. Explain why the chord is a diameter. [3 marks]

The corresponding central angle is 180°.

The endpoints are opposite ends of a diameter.

Answer: Its intercepted arc is a semicircle.