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 $\angle ACB$. [2 marks]

Same minor arc: $\frac{84}{2} = 42$.

Answer: 42°

2. $\angle ACB = 37^\circ$ 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 $\angle ADB$. [2 marks]

Opposite arc is major: $360 - 120 = 240$.

$\frac{240}{2} = 120$.

Answer: 120°

4. C and D lie on the same arc of chord AB. $\angle ACB = 46^\circ$. Find $\angle ADB$. [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. $\angle CAB = 32^\circ$. Find $\angle ABC$. [2 marks]

$\angle ACB = 90^\circ$.

$180 - 90 - 32 = 58$.

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.