

CIRCLE THEOREMS

Answer all of these questions. Remember to show your working out in all questions.

MAIN QUESTIONS

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| 1. | Find the angle subtended at the centre of a circle by an arc of 60° . | 60° | 2. | Find the angle subtended at the circumference of a circle by an arc of 120° . | 60° |
| 3. | In a circle, angle $AOB = 80^\circ$ where O is the centre. Find angle APB where P is a point on the circumference. | 40° | 4. | In a circle, angle $APB = 50^\circ$ where P is a point on the circumference. Find angle AOB where O is the centre. | 100° |
| 5. | Find the angle in a semicircle. | 90° | 6. | In a circle, angle $ABC = 70^\circ$ where A , B , and C lie on the circumference. Find angle AOC where O is the centre. | 140° |
| 7. | In a circle, angle $AOC = 160^\circ$ where O is the centre. Find angle ABC where A , B , and C lie on the circumference. | 80° | 8. | In a circle, angle $APB = 30^\circ$ where P is a point on the circumference. Find angle AQB where Q is another point on the circumference. | 30° |

9. In a circle, angle $AOB = 90^\circ$ where O is the centre. Find angle APB where P is a point on the circumference. 45°
10. In a circle, angle $APB = 110^\circ$ where P is a point on the circumference. Find angle AOB where O is the centre. 220°
11. In a circle, angle $ABC = 45^\circ$ where A , B , and C lie on the circumference. Find angle AOC where O is the centre. 90°
12. In a circle, angle $AOC = 200^\circ$ where O is the centre. Find angle ABC where A , B , and C lie on the circumference. 100°
13. In a circle, angle $APB = 25^\circ$ where P is a point on the circumference. Find angle AQB where Q is another point on the circumference. 25°
14. In a circle, angle $AOB = 72^\circ$ where O is the centre. Find angle APB where P is a point on the circumference. 36°
15. In a circle, angle $APB = 130^\circ$ where P is a point on the circumference. Find angle AOB where O is the centre. 260°
16. In a circle, angle $ABC = 55^\circ$ where A , B , and C lie on the circumference. Find angle AOC where O is the centre. 110°
17. In a circle, angle $AOC = 240^\circ$ where O is the centre. Find angle ABC where A , B , and C lie on the circumference. 120°
18. In a circle, angle $APB = 40^\circ$ where P is a point on the circumference. Find angle AQB where Q is another point on the circumference. 40°
19. In a circle, angle $AOB = 108^\circ$ where O is the centre. Find angle APB
20. In a circle, angle $APB = 150^\circ$ where P is a point on the circumference. Find

MASTER QUESTIONS



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- M1.** A circle has centre O. Points A, B, and C lie on the circumference. Angle ABC is 65° . Find angle AOC. | 130°
- M2.** A circle has centre O. Points A, B, and C lie on the circumference. Angle AOC is 150° . Find angle ABC. | 75°
- M3.** A circle has centre O. Points A, B, and P lie on the circumference. Angle APB is 35° . Find angle AOB. | 70°
- M4.** A circle has centre O. Points A, B, and P lie on the circumference. Angle AOB is 144° . Find angle APB. | 72°
- M5.** A circle has centre O. Points A, B, C, and D lie on the circumference. Angle ABC is 80° and angle BCD is 110° . Find angle AOC. | 160°