Q1. **A circle of radius 8 cm circumscribed a square. The length of the side of the square is:**
(a) $2\sqrt{2}$ cm
(b) $6\sqrt{2}$ cm
(b) $8\sqrt{2}$ cm
(d) $4\sqrt{2}$ cm

Q2. **PQ is a diameter of a circle whose centre is O. If a point R lies on the circle and ∠RPO is 39°, then find the measure of ∠RQP.**
(a) 51°
(b) 125°
(b) 129°
(d) 151°

Q3. **In △PQR, QR is extended up to S, so that RS = RP. If ∠RPQ =55° and ∠PRS =110°, then find the measure of ∠PQS.**
(a) 55°
(b) 65°
(b) 15°
(d) 75°

Q4. **The length of a tangent drawn to a circle of radius 4 cm from a point 5 cm away from the center of the circle is:**
(a) 5cm
(b) 5 cm
(b) 3cm
(d) 3 cm

Q5. **If in a circle of radius r = 36 cm a sector of arc length l, satisfies 4l =3r, then the area of the sector is:**
(a) 496 cm^2
(b) 486 cm^2
(b) 476 cm^2
(d) 461 cm^2

Q6. **If a tangent to a circle from a point P meets the circle at A with AP =15cm. Given that the radius of the circle is 8 cm, find the distance of P from the centre of the circle.**
(a) 20cm
(b) 17cm
(b) 12cm
(d) 15m

Q7. **If SA and SB are tangents to a circle from an outside point S, such that SA = 12 cm and angle ASB = 60°. What will the length of chord AB be?**
(a) 12 cm
(b) 3 cm
(b) 6 cm
(d) 24 cm

Q8. **Lengths of a triangle are positive integers. If two of its sides measure 6cm, 3cm then the number of such distinct triangles is:**
(a) 5
(b) 9
(b) 3
(d) 7

Q9. **The sides of a parallelogram are 3x + 2 and 5x + 4. It has a perimeter of 44 cm and an area of 64 cm2, The value of the acute angle between its sides in degrees is:**
(a) between 60° and 75°
(b) between 30° and 60°
(b) greater than 75°
(d) less than 30°

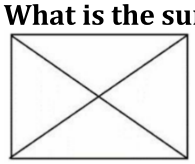
Q10. **The angles of a quadrilateral are in the ratios 2 : 4: 6 : 8. The smallest of these angles is:**
(a) 60°
(b) 22°
(b) 72°
(d) 36°

Q11. **The areas of two similar triangles are respectively 16 m^2 and 36 m^2. Find the ratio of their corresponding sides.**
(a) 16:36
(b) 4:8
(b) 4:6
(d) 3:4

Q12. **The adjacent sides of a parallelogram are 4a and 3a. If the angle between them is 60°, then one of the diagonals of the parallelogram will be:**
(a) $\sqrt{13}$ a
(b) $2\sqrt{3}$ a
(b) $5\sqrt{3}$ a
(d) $3\sqrt{3}$ a

Q13. **If the difference between the interior and exterior angles of a polygon is 36°, then find the number of sides in the polygon.**
(a) 6
(b) 5
(b) 8
(d) 7

Q14. **What is the sum of all angles of all triangles in the given figure?**



(a) 1080°
(b) 720°
(b) 360°
(d) 1440°

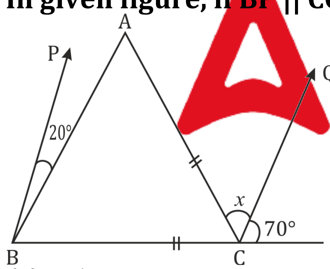
Q15. The supplement of 70° is:
(a) 120°
(b) 250°
(b) 100°
(d) 110°

Q16. A point P is 13 cm from the center of a circle. The length of the tangent drawn from P to the circle is 12 cm. Find the radius of the circle.
(a) 5 cm
(b) 4 cm
(b) 6 cm
(d) 3 cm

Q17. PQ is the diameter of a circle whose centre is O. if a point R lies on the circle and ∠RPO is 39°, then what will be the measure of ∠RQP?
(a) 51°
(b) 125°
(b) 129°
(d) 151°

Q18. If the radius of two circles are 4.5 cm and 3.5 cm and the length of the transverse common tangent is 6 cm, then the distance between the two centers will be:
(a) 8 cm
(b) 10 cm
(b) 12 cm
(d) 9 cm

Q19. In given figure, if BP || CQ and AC = BC, then the measure of x is



(a) 35°
(b) 20°
(b) 25°
(d) 30°

Q20. a, b and c are the sides of a right triangle with c as hypotenuse. The radius r, of the circle which touches the three sides of the triangle is :
(a) $r = \frac{(a - b - c)}{2}$
(b) $r = \frac{(a + b - c)}{2}$
(b) $r = \frac{(a - b + c)}{2}$
(d) $r = \frac{(a + b + c)}{2}$

[redacted]

S1. Ans.(c)

S2. Ans.(a)

S3. Ans.(a)

S4. Ans.(d)

S5. Ans.(b)

S6. Ans.(b)

S7. Ans.(a)

S8. Ans.(a)

S9. Ans.(b)

S10. Ans.(d)

S11. Ans.(c)

S12. Ans.(a)

S13. Ans.(b)

S14. Ans.(d)

S15. Ans.(d)

S16. Ans.(a)

S17. Ans.(a)

S18. Ans.(b)

S19. Ans.(d)

S20. Ans.(b)