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Chapter 10 : Geometry

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Geometry

SSC CGL Tier-1

1 Dec Shift-2
11:45 AM - 12:45 PM

1. If areas of similar triangles Δ ABC and Δ DEF are x2cm2 and y2cm2 respectively, and EF = a cm, then BC (in cm) is:

   A. $\frac{y^2}{a^2x^2}$

   B. $\frac{y}{ax}$

   C. $\frac{ax}{y}$

   D. $\frac{a^2x^2}{y^2}$

Geometry

SSC CGL Tier-1

1 Dec Shift-2
11:45 AM - 12:45 PM

2. The side of an equilateral triangle is 12 cm. what is the radius of the circle circumscribing this equilateral triangle?

A. $6\sqrt{3}\ cm$
B. $4\sqrt{3}\ cm$
C. $9\sqrt{3}\ cm$
D. $5\sqrt{3}\ cm$

Geometry

SSC CGL Tier-1

1 Dec Shift-2
11:45 AM - 12:45 PM

3. If the angles of a triangle are (x – 46) degrees, (x + 96) degrees and 8x degrees, then what is the value of 2x?
   A. 15 degrees
   B. 24 degrees
   C. 26 degrees
   D. 13 degrees

Geometry

SSC CGL Tier-1

1 Dec Shift-2
11:45 AM - 12:45 PM

4. O is the centre of this circle. Tangent drawn from a point P, touches the circle at Q. If PQ = 24 cm and OQ = 10 cm, then what is the value of OP?

A. 26 cm
B. 52 cm
C. 13 cm
D. 15 cm

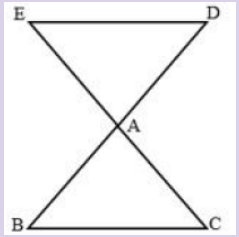
Geometry

SSC CGL Tier-1

1 Dec Shift-3 2:30 PM - 3:30 PM

5. In the figure, AB = AD = 7 cm and AC = AE and BC = 11 cm, then find the length of ED

A. 12
B. 10
C. 11
D. 2

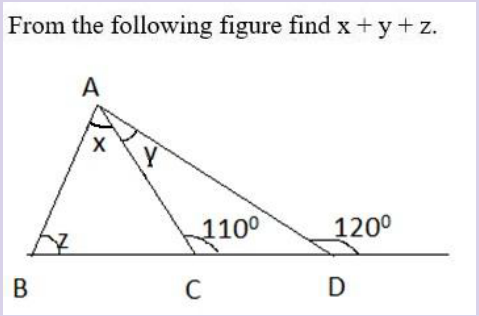


Geometry

SSC CGL Tier-1

1 Dec Shift-3 2:30 PM - 3:30 PM

6. From the following figure find x + y + z.
   A. 100°
   B. 130°
   C. 120°
   D. 110°



Geometry

SSC CGL Tier-1

1 Dec
Shift-3 2:30 PM - 3:30 PM

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7. In triangle ABC, the bisector of angle BAC cuts the line BC at D. If BD = 6 and BC = 14 then what is the value of AB : AC?
   A. 3 : 4
   B. 7 : 3
   C. 3 : 10
   D. 3 : 7

Geometry

SSC CGL Tier-1

1 Dec Shift-4
5:15 PM - 6:15 PM

8. Two equal circles of radius 8 cm intersect each other in such a way that each passes through the centre of the other. The length of the common chord is:

A. $8\sqrt{3}cm$
B. $\sqrt{3}cm$
C. $2\sqrt{3}cm$
D. $4\sqrt{3}cm$

Geometry

SSC CGL Tier-1

1 Dec Shift-4
5:15 PM - 6:15 PM

9. A chord of length 42 cm is drawn in a circle having diameter 58 cm. What is the minimum distance of other parallel chord of length 40 cm in the same circle from 42 cm long chord?
   A. 4 cm
   B. 1 cm
   C. 3 cm
   D. 2 cm

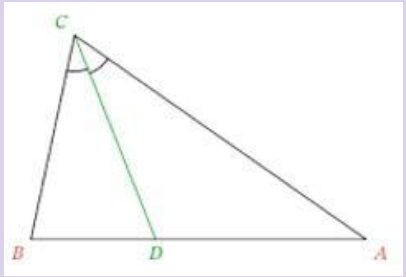
Geometry

SSC CGL Tier-1

1 Dec Shift-4
5:15 PM - 6:15 PM

10. In the given triangle, CD is the bisector of ∠BCA. CD = DA. If ∠ BDC = 76° what is the degree measure of ∠CBD?

A. 32°
B. 76°
C. 80°
D. 66°



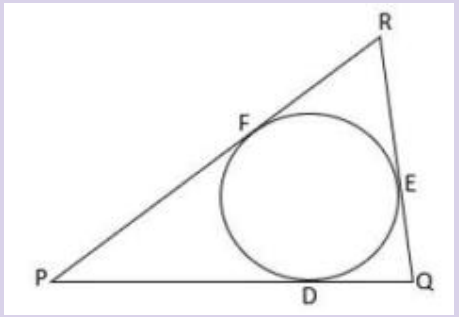
Geometry

SSC CGL Tier-1

2 Dec, 2022 Shift-1
9:00 AM - 10:00 AM

11. In the given figure, a circle is inscribed in DPQR, such that it touches the sides PQ, QR and RP at points D, E, F, respectively. if the lengths of the sides PQ=15 cm, QR=11 cm and RP=13 cm, then find the length of PD.

A. 9 cm
B. 8 cm
C. 7.5 cm
D. 8.5 cm



Geometry

SSC CGL Tier-1

2 Dec, 2022 Shift-2 (11:45 AM - 12:45 PM)

12. In ΔABC, AB = AC, O is a point on BC such that BO = CO and OD is perpendicular to AB and OE is perpendicular to AC. If $\angle BOD = 60°$, then measure of $\angle AOE$ is:
    A. $120°$
    B. $60°$
    C. $30°$
    D. $90°$

Geometry

SSC CGL Tier-1

2 Dec, 2022 Shift-3 (2:30 PM - 3:30 PM)

13. The length of the tangent to a circle from a point P is 15 cm. Point P is 17 cm away from the centre. What is the radius of the circle?
    A. 7 cm
    B. 9 cm
    C. 8 cm
    D. 4 cm

Geometry

SSC CGL Tier-1

2 Dec, 2022 Shift-3 (2:30 PM - 3:30 PM)

14. Side of an equilateral triangle is 24 cm. What will be the radius of in circle of this equilateral triangle?
    A. 6 cm
    B. 12 cm
    C. 8 cm
    D. 3 cm

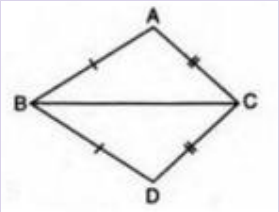
Geometry

SSC CGL Tier-1

2 Dec, 2022 Shift-4 (5:15 PM - 6:15 PM)

15. In the given figure, AB = DB and AC. If ∠ABD = 58° and ∠ DBC = (2x – 4)°, ∠ACB = (y + 15)° and ∠DCB = 63°

A. 325
B. 273
C. 259
D. 268



Geometry

SSC CGL Tier-1

2 Dec, 2022 Shift-4 (5:15 PM - 6:15 PM)

16. O is the incentre of the triangle PQR. If angle POR = 140 degree, then what is the angle PQR?
    A. 40 degree
    B. 140 degree
    C. 100 degree
    D. 70 degree

Geometry

SSC CGL Tier-1

2 Dec, 2022 Shift-4 (5:15 PM - 6:15 PM)

17. If the side of an equilateral triangle is 20 cm, then what is its area?
    A. $110\sqrt{3}\ cm^2$
    B. $125\sqrt{3}\ cm^2$
    C. $200\sqrt{3}\ cm^2$
    D. $100\sqrt{3}\ cm^2$

Geometry

SSC CGL Tier-1

2 Dec, 2022 Shift-4 (5:15 PM - 6:15 PM)

18. From the circumcentre L of ΔXYZ, perpendicular LM is drawn on side YZ. If $\angle YXZ = 60°$, then the measure of $\angle YLM$ is:
    A. $60°$
    B. $120°$
    C. $180°$
    D. $90°$

Geometry

SSC CGL Tier-1

3 Dec, 2022 Shift-1 (9:00 AM - 10:00 AM)

19. Select the correct option with respect to the given statement. Two tangents are drawn at the end of the diameter of a circle.
    A. They intersect each other.
    B. They pass through origin.
    C. They are parallel to each other.
    D. They are perpendicular to each other.

Geometry

SSC CGL Tier-1

3 Dec, 2022 Shift-1 (9:00 AM - 10:00 AM)

20. In triangle ABC, the bisector of angle BAC cuts the side BC at D. If AB = 10 cm, and AC = 14 cm, then what is BD : BC ?

A. 10 : 7
B. 5 : 7
C. 7 : 5
D. 7 : 10