Quant Mega Quiz for SSC CGL Tier - 2

Q1. ABC is a triangular field and D, E, F are the mid-points of the sides BC, CA, AB respectively. The ratio of the areas of Δ ABC and Δ DEF is :

(a) 4 : 1
(b) 5 : 1
(c) 3 : 1
(d) can't be determined

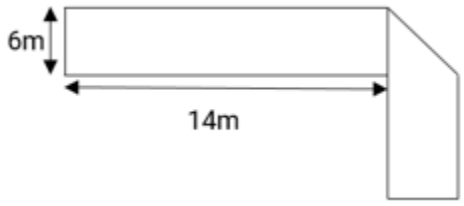
Q2. The length and breadth of a rectangular field are 120 m and 80 m respectively. Inside the field, a park of 12 m width is made around the field. The area of the park is :

(a) 2358 m^2
(b) 7344 m^2
(c) 4224 m^2
(d) 3224 m^2

Q3. The circumference of the front wheel of a cart is 30 ft long and that of the back wheel is 36 ft long. What is the distance travelled by the cart, when the front wheel has done five more revolutions than the rear wheel?

(a) 20 ft
(b) 25 ft
(c) 750 ft
(d) 900 ft

Q4. The figure below has been obtained by folding a rectangle. The total area of the figure (as visible) is 144 square meters. Had the rectangle not been folded, the current overlapping part would have been a square. What would have been the total area of the original unfolded rectangle?

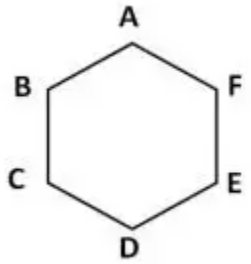


(a) 128 square meters
(b) 154 square meters
(c) 162 square meters
(d) 172 square meters

Q5. A circular road is constructed outside a square field. The perimeter of the square field is 200 ft. If the width of the road is $7\sqrt{2}$ ft. and cost of construction is Rs. 100 per sq. ft. Find the lowest possible cost to construct 50% of the total road.

(a) Rs.70,400
(b) Rs.1,25,400
(c) Rs.1,40,800
(d) Rs.2,35,400

Q6. The hexagon ABCDEF is regular. That means all its sides are of the same length and all its interior angles are of the same size. Each side of the hexagon is 2m. What is the area of the rectangle BCEF?



(a) 4 sq.m
(b) $4\sqrt{3}$ sq.m
(c) 8 sq.m
(d) $4 + 4\sqrt{3}$ sq.m

Q7. If x units are added to the length of the radius of a circle, what is the number of units by which the circumference of the circle is increased?

(a) x
(b) 2
(c) 2π
(d) $2\pi x$

Q8. A contractor undertakes a job of fencing a rectangular field of length 100 m and breadth 50 m. The cost of fencing is Rs. 2 per metre and the labour charges are Re. 1 per metre, both paid directly to the contractor. Find the total cost of fencing if 10 % of the amount paid to the contractor is paid as tax to the land authority.

(a) 900
(b) 990
(c) 950
(d) 810

Q9. Eldeco Housing Pvt. Ltd purchased a circular plot of land for Rs. 158400 at the rate of 1400 per sq. metre. The radius of the plot is :

(a) 5 m
(b) 6 m
(c) 7 m
(d) 14 m

Q10. If the perimeter of a square and a rectangle are the same, then the areas A and B (respectively) enclosed by them would satisfy the inequality:
(a) A>B
(b) A≥B
(c) A<B
(d) A≤B

Q11. A large cube is formed from the material obtained by melting three smaller cubes of 3, 4 and 5 cm side. What is the ratio of the total surface areas of the smaller cubes and the large cube?
(a) 2 : 1
(b) 3 : 2
(c) 25 : 18
(d) 27 : 20

Q12. A cylinder 6 cm in diameter is partially filled with water. A sphere 3 cm in diameter is gently dropped into the cylinder. To what further height will the water in the cylinder rise?
(a) 6 cm
(b) 2 cm
(c) 1/2 cm
(d) None of these

Q13. A copper sphere is drawn into a cylindrical wire of 4 m length. If the diameter of the sphere is ten times the diameter of the wire, then what is the radius of the sphere ?
(a) 3 cm
(b) 3 mm
(c) 6 cm
(d) 6π mm

Q14. The diamensions of an open box are 52 cm × 40 cm × 29 cm. Its thickness is 2 cm. If 1 cu cm of metal used in the box weighs 0.5 g, then the weight of the box is:
(a) 6.832 kg
(b) 7.576 kg
(c) 7.76 kg
(d) 8.56 kg

Q15. A cylindrical bucket of height 36 cm and radius 21 cm is filled with sand. The bucket is emptied on the ground and a conical heap of sand is formed. The height of the conical heap is 12 cm. The radius of the heap at the base is:
(a) 63 cm
(b) 53 cm
(c) 56 cm
(d) 66 cm

Q16. A hemispherical bowl is made of steel 0.5 cm thick. The inside radius of the bowl is 4 cm. the volume of the steel used in making the bowl is:
(a) 55.83 cm^2
(b) 56.83 cm^2
(c) 57.83 cm^3
(d) 58.83 cm^3

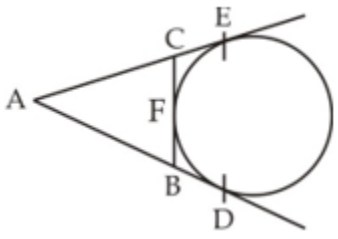
Q17. A metallic sheet is of rectangular shape with dimensions 48 m × 36 m. From each of its corners, a square is cut off so as to make an open box. The volume of the box is X m^3, when the length of the square is 8 m, the volume of X is:
(a) 5110
(b) 8960
(c) 4830
(d) 5120

Q18. The sum of length, breadth and height of a room is 19 m. The length of the diagonal is 11 m. The cost of painting the total surface area of the room at the rate of Rs. 10 per m^2 is:
(a) Rs. 240
(b) Rs. 2400
(c) Rs. 420
(d) Rs. 4200

Q19. The cost of painting the walls of a room at the rate of Rs. 1.35 per square metre is Rs. 340.20 and the cost of matting the floor at the rate of Re. 0.85 per square metre is Rs. 91.80. If the length of the room is 12 m, then the height of the room is:
(a) 6 m
(b) 12 m
(c) 1.2 m
(d) 12.6 m

Q20. Find the number of coins, 1.5 cm in diameter and 0.2 cm thick, to be melted to form a right circular cylinder of height 10 cm and diameter 4.5 cm.
(a) 430
(b) 440
(c) 450
(d) 460

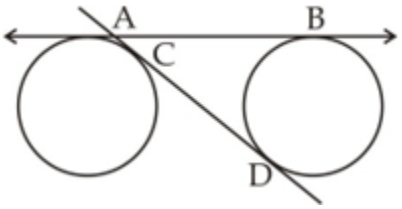
Q21. In the given figure, AD, AE and BC are tangents, then:-



(a) AD = AB + BC + CA
(b) 2AD = AB + BC + CA
(c) 3AD = AB + BC + CA
(d) 4AD = AB + BC + CA

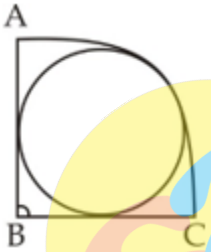
Q22. If G is centroid and AD, BE, CF are three medians of Δ ABC with area 72 cm^2, then the area of Δ BDG is :
(a) 12 cm^2
(b) 16 cm^2
(c) 24 cm^2
(d) 8 cm^2

Q23. If two equal circles of radius 5 cm have two common tangent AB and CD which touch the circle on A,C, and B,D respectively and if CD = 24 cm, find the length of AB.



(a) 27 cm
(b) 25 cm
(c) 26 cm
(d) 30 cm

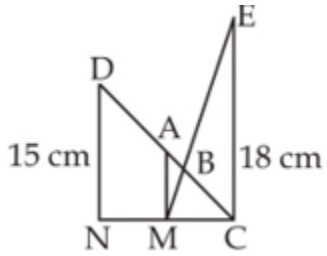
Q24. If ABC is a Quarter Circle and a circle is inscribld in it and if AB = 1 cm, find radius of smaller circle.



(a) $\sqrt{2}-1$
(b) $\frac{\sqrt{2}-1}{2}$
(c) $\frac{\sqrt{2}+1}{2}$
(d) $1-2\sqrt{2}$

Q25. Find the length of the commaon chord of two circles of radius 15 cm and 20 cm if their centres are 25 cm apart?
(a) 12 cm
(b) 20 cm
(c) 18 cm
(d) 24 cm

Q26. In the given figure, EC || AM || DN and AB = 5 cm, BC = 10 cm. Find DC :



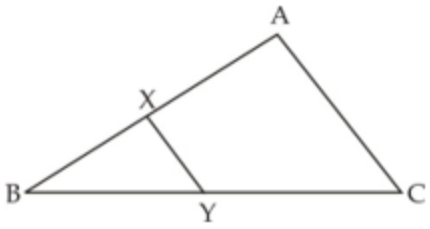
(a) 19 cm

(b) 20 cm

(c) 25 cm

(d) 17.5 cm

Q27. In the given figure, the line segment XY || AC and it divides the triangle into two parts of equal areas. Find ratio $\frac{AX}{AB}$:



(a) $\frac{1}{2}$

(b) $\frac{1}{\sqrt{2}}$

(c) $\frac{\sqrt{2}+1}{\sqrt{2}}$

(d) $\frac{\sqrt{2}-1}{\sqrt{2}}$

Q28. The lengths of perpendiculars drawn from any point in the interior of an equilateral triangle to the respective side are 6 cm, 8cm, and 10 cm. The length of each side of the triangle is :

(a) $24\sqrt{3}$ cm

(b) $8\sqrt{3}$ cm

(c) $16\sqrt{3}$ cm

(d) 48 cm

Q29. In a right angled Δ ABC, ∠ABC = 90°; BN ⊥ AC, AB = 6 cm, AC = 10 cm. Then AN : NC is:

(a) 3 : 4

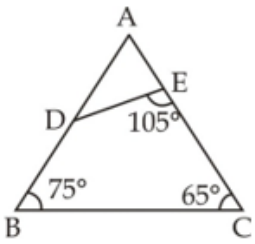
(b) 3 : 16

(c) 1 : 4

(d) 9 : 16

Q30.

In the given figure, if $\frac{DE}{BC} = \frac{2}{3}$ and if AE = 12 . Find AB :



(a) 16 cm
(b) 12 cm
(c) 15 cm
(d) 18 cm