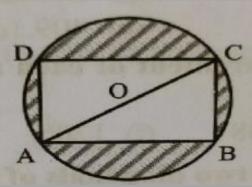
# **Cosmo School**

Work Sheet – 05 (Mathematics) for class – Nine (15.10.2020) Chapter – Sixteen, Exercise - 16.3

Mensuration

#### **Creative Multiplication Choice Questions**

1.



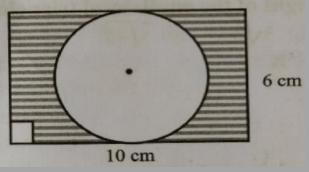
ABCD is a circle with centre O. ABCD is its internal rectangle. AB = 8 cm and BC = 6 cm then what is the area of shaded part? [D.B.- 20]

- a) 266.16 cm<sup>2</sup>
- b) 250.16 cm<sup>2</sup>
- c)  $78.54 \text{ cm}^2$
- d)  $30.54 \text{ cm}^2$
- 2. If the length of a perpendicular on the chord is 3 cm from the centre of a circle with radius of 5 cm then what is the length of that chord of the circle?

[Dj.B.- 20]

- a) 16 cm
- b) 8 cm
- c) 4 cm
- d) 2 cm
- 3. The diameter of a circle is 26 cm. Then what is the area of the circle is in square cm (approx.)? [S.B.- 20]
  - a) 2123.72
- b) 530.93
- c) 163.36
- d) 81.68

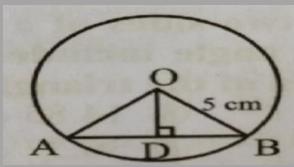
4.



What is the area of the shaded region of the rectangle in the figure? [J.B.- 20]

- a)  $28.27 \text{ cm}^2$
- b)  $31.73 \text{ cm}^2$
- c)  $33.27 \text{ cm}^2$
- d)  $60 \text{ cm}^2$

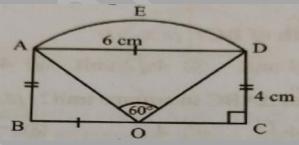
5.



O is the center of a circle and BD = 4 cm. What is the area of  $\triangle OAB$ ? [Ctg.B.- 20]

- a)  $10 \text{ cm}^2$
- b) 12 cm<sup>2</sup>
- c)  $20 \text{ cm}^2$
- d) 24 cm<sup>2</sup>

Answer to the following questions No. (6 - 7) as per information from the picture below:



6. What is the length of the arc AED?

[Ctg.B.- 20]

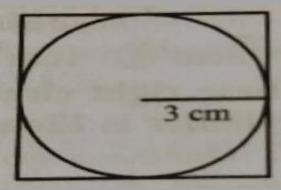
- a) 26.180 cm
- b) 13.09 cm
- c) 10.472 cm
- d) 5.236 cm

7. What is the area of the triangle AOB?

[Ctg.B.- 20]

- a)  $6 \text{ cm}^2$
- b) 10 cm<sup>2</sup>
- c) 12 cm<sup>2</sup>
- d) 24 cm<sup>2</sup>

8.



In figure –

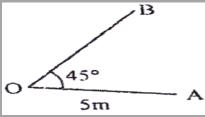
[C.B.- 20]

- i. The length of square is 16 cm.
- ii. The circumference of the circle 12 cm.
- iii. The ratio of area of the circle and square is  $\pi$ : 4.

### Which one of the following is correct?

- a) i and ii
- b) i and iii
- c) ii and iii
- d) i, ii and iii
- 9. If radius of a circle is increased two time then what times will be the area increased? [R.B.-19]
  - a) 3 times
- b) 4 times
- c) 8 times
- d) 9 times
- 10. Diameter of a wheel is 8 cm. What is the area of wheel? [Dj.B.- 19]
  - a)  $8\pi \text{ cm}^2$
- b)  $16\pi$  cm<sup>2</sup>
- c)  $32\pi$  cm<sup>2</sup>
- d)  $64\pi \text{ cm}^2$

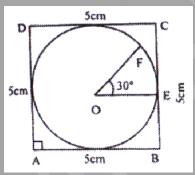
11.



What is the area of the circular segment AOB?  $[\pi = 3.14]$  [B.B.-19]

- a) 1.96 sq. m (app.)
- b) 3.93 sq. m (app.)
- c) 9.81 sq. m (app.)
- d) 78.5 sq. m (app.)

12.



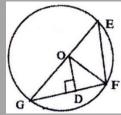
## In figure then -

- i. The area of the square = 25 square cm.
- ii. The circumference of the circle = 15.71 cm.
- iii. Area of the circular segment EOF = 1.64 square cm.

#### Which one of the following is correct?

- a) i and ii
- b) i and iii
- c) ii and iii
- d) i. ii and iii

According to the given information answer the questions no. (13-14):



O is the centre of circle, GE = 10 cm and GD = 4 cm.

13. 
$$\frac{1}{2} \angle EFG = What?$$

[Dj.B.- 19]

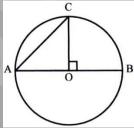
- a) 30°
- b) 45°
- c) 60°
- d) 90°

## 14. What is the perimeter of $\Delta DOF$ ?

[Dj.B.- 19]

- a) 12 cm
- b) 13 cm
- c) 16 cm
- d) 18 cm

Read the following statement and answer to the questions no. (15-16):



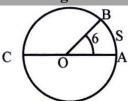
AB is the diameter of circle ABC which centre O.

15. What is the perimeter of the circle, where the length of are ABC is  $2\pi$  cm?

[S.B.- 19]

- a) π cm
- b)  $4\pi$  cm
- c)  $2\pi r$  cm
- d)  $4\pi r$  cm
- 16. If BO = 4 cm then which is the value of AC? [S.B.- 19]
  - a)  $4\sqrt{2}$  cm
- b)  $4\sqrt{3}$  cm
- c) 8 cm
- d) 32 cm

Answer to the questions No. (17 - 18) on the basis of above figure:



O is the centre of a circle and AC = 12 cm,  $\angle AOB = 60^{\circ}$ .

- 17. Find the length of the are AB. [J.B.- 19]
  - a) 40.84 cm
- b) 12.57 cm
- c) 6.28 cm
- d) 3.14 cm

- 18. What is the area of circular segment AOB? [J.B.- 19]
  - a) 150.80 cm<sup>2</sup>
- b)  $75.40 \text{ cm}^2$
- c)  $40.84 \text{ cm}^2$
- d) 18.85 cm<sup>2</sup>

Answer to the questions No. (19-20) from the following stem:

AB = 10 cm,  $OE \perp AD$ , OE = 3 cm,  $AC \perp BC$  are in the circle ABCD with centre O.

- 19. What is the area of  $\triangle OAE$ ? [D.B.- 19]
  - a)  $6 \text{ cm}^2$
- b) 12 cm<sup>2</sup>
- c)  $15 \text{ cm}^2$
- d)  $20 \text{ cm}^2$
- 20. What is the perimeter of  $\triangle ACB$ ?

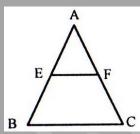
[D.B.- 19]

- a) 15.14 cm
- b) 20.14 cm
- c) 24.14 cm
- d) 30.14 cm
- 21. The diameter of a circle is 24 cm. What is its circumference in cm?

[All. B.- 18]

- a) 15.07
- b) 37.7
- c) 75.4
- d) 150.77

22.



If E, F are the mid-points of AB, AC respectively then which one below is correct? [Ctg.B.- 17]

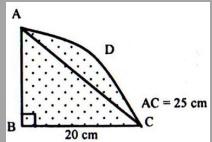
- a) AB ||AC
- b) AB = BC
- c) BC = EF
- d) BC = 2EF
- 23. If the diameter of a circle is 26 metre then what is the circumference of the circle? [Dj.B.- 17]
  - a) 13π
- b) 26π
- c) 39m
- d) 52π
- 24. If the diameter of a circle is 12 cm then what is the perimeter of it?

[S.B.- 17]

- a) 37.70 cm
- b) 75.40 cm
- c) 113.10cm
- d) 452.39 cm
- 25. The diameter of circle is 28 cm. What is its circumference in cm? [B.B.- 17]
  - a) 42.48
- b) 87.96
- c) 48.94
- d) 44.43

- 26. The radius of a circle is 5 cm and a circular segment subtends an angle 60° at the centre. What is the area of the circular segment? [S.B.-16]
  - a) 13.09 sq. cm
- b) 78.54 sq. cm.
- c) 31.42 sq. cm.
- d) 471.24 sq. cm.

According to the figure below answer to the questions no. (27-28):

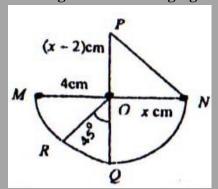


- 27. What is the length of the arc ADC?

  [J.B.- 16]
  - a) 39.27 cm
- b) 78.54 cm
- c) 245.44 cm
- d) 490.88 cm
- 28. What is area of shaded region ABCD?

  [J.B.- 16]
  - a) 395.44 square cm
  - b) 495.44 square cm
  - c) 640.88 square cm
  - d) 740.88 square cm

Answer to the questions No. (29 - 31) according to the following figure:



- 29. The difference of angles  $\angle$ MON and  $\angle$ QOR then what type of angle is formed? [Ctg.B.- 16]
  - a) Acute angle
  - b) Supplementary angle
  - c) Obtuse angle
  - d) Reflex angle
- 30. What is the length of PN in cm?

[Ceg.B.- 16]

- a)  $2\sqrt{7}$
- b) 10
- c) 28
- d) 100

31. What is the area of circular segment OON? [Ctg.B.- 16]

c) 24

37.

a) 12.57 square cm (Approx)

What is the circumference of the half circle AKB? [C.B.- 15]

b) 25.13 square cm (Approx)

b) 18.85 (Approx) d) 96

b) 20

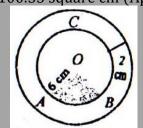
d) 120

c) 50.27 square cm (Approx) d) 100.53 square cm (Approx)

c) 37.7(Approx)

a) 12

a) 18

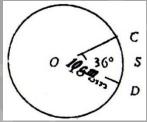


38. A wheel rotates 18 times to cover 720 metre length then which is the perimeter of the wheel? [Dj.B.- 15]

a) 40 meter

- b) 738 meter
- c) 702 meter
- d) 12980 meter

39.



from the above information: 32. If  $\angle AOB = 30^{\circ}$  then what is the length of the arc AB in centimeter?

circular field ABC with center O.

In the above figure there is a path with 2 metre width all around the

Answer to the questions No. (32 - 34)

[C.B.- 16]

- a) 2.4561
- b) 3.1416
- c) 4.2531
- d) 6.3025
- 33. What is the area of the dark marked region in square centimeter?

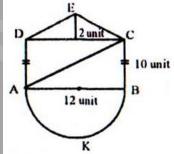
[C.B.- 16]

- a) π
- b) 2π
- c) 3 $\pi$
- d) 4π
- 34. What is the area of the path?

[C.B.- 16]

- a) 87.96
- b) 113.09
- c) 201.06
- d) 210.06

Answer to the questions no. (35 - 37)according to the information:



AC = What unit? 35.

[C.B.- 15]

- a) 13.52 (Approx)
- b) 14.12 (Approx)
- c) 15.01 (Approx)
- d) 15.62 (Approx)
- 36. What is square unit of the area of triangle CDE? [C.B.-15]

What is the length of the are CD in the above figure? [Ctg.B.- 15]

- a)  $2\pi$
- b)  $\frac{\pi}{2}$
- c)
- d)  $\frac{\pi}{}$
- 40. If the radius of a circle is r then what is its circumference? [J.B.- 15]
  - a) πr
- b)  $2\pi r$
- c)  $\pi r^2$
- d)  $2\pi r^2$
- 41. The area of a half circle is 25.135 square cm then what its radius?

[B.B.- 15]

- a) 4 cm
- b) 3 cm
- c) 2 cm
- d) 1 cm
- If the difference between the radius 42. and circumference of a circle is 90 cm. What is the radius of the circle in cm?
  - a) 21.01
- b) 17.01
- c) 15.01
- d) 13.01
- 43. If the area of a circle is equal to area of a square then what is the ratio of their perimeter?
  - a)  $2 : \pi$
- b)  $\sqrt{2} : \pi$
- c)  $\sqrt{\pi}:2$
- d)  $\sqrt{3}$ :  $\pi$