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MATHEMATICS ASSIGNMENT

CLASS VII

- Q1. Find the area of a square park whose perimeter is 320 m.
- Q2. A wall 4.84 m long and 3.1 m high is to be covered with rectangular tiles of size 22cm by 10cm .Find the cost of the tiles at the rate of Rs.1.50 per tile .
- Q3. A table cover 4m x 2m , is spread on a meeting table. If 25 cm of the table cover is hanging all around the table, find the cost of painting the table top at Rs.2.25 per square meter .
- Q4. A rectangular park is 45 m long and 30 m wide. A path 2.5 m wide is constructed outside the park. Find the area of the park also find the cost of cementing the path at the rate of Rs.150 per meter square.
- Q6. A grassy plot is 80 m x 60 m. Two cross paths each 4m wide are constructed at right angles through the center of the plot such that each path is parallel to one of the sides of the plot. Find the total area of paths. Also find the cost of gravelling them at Rs. 5 per square m.
- Q7. A plot of land is in the form of a right triangular region. The legs are of lengths 12m and 5m. Find the area of the plot.
- Q8. The area of the triangular field is 225 m^2 . Find its base if its height is 9m.
- Q9. The area of a triangle is equal to that of a square, whose each side measures 70 m. Find the base of the triangle when the height is 98m.
- Q10 The base of a parallelogram is thrice its height. If the area is 876 cm^2 , find the base and height of the parallelogram.
- Q11.If the area of a rhombus be 24 cm^2 and one of the diagonals be 4cm, find the perimeter of the rhombus.
- Q12. Find the area of a rhombus having each side equal to 13cm and one of whose diagonal is 24cm.
- Q13. The longer side of a parallelogram is 54cm and the corresponding altitude is 16cm. If the altitude corresponding to the shorter side is 24 cm, find the length of the shorter side.
- Q14. A piece of wire in the form of a rectangle 8.9 cm long and 5.4 cm broad is reshaped and bent into the form of a circle. Find the radius of the circle.
- Q15. The circumference of a circle exceeds its diameter by 30cm. Find the radius of the circle.

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Q16. In the given figure above, the radius of quarter circular plot taken is 2m and radius of the flower bed is 2m. Find the area of the remaining field.

Q17. The circumference of a circle is 44cm. Find the area of the circle.

Q18. An ox in a kolhu (an oil processing apparatus) is tethered to a rope 3m long. How much distance does it cover in 14 rounds ?

Q19. The diameter of a circular park is 84 metres. A 3.5 m wide road runs on the outside around it. Find the cost of constructing the road at Rs. 20 per m^2

Q20. The area of a circle is 100 times the area of another circle. What is the ratio of their circumferences ?

Q21. Express the following as a rational number:

(a) $(-3)^{-3}$ (b) $\left(\frac{-2}{5}\right)^{-2}$ (c) $\left(\frac{-3}{4}\right)^3$ (d) $\left(\frac{-2}{3}\right)^{-2}$ (e) $\left[\frac{1}{2}\right]^{-4}$

Q22. Simplify the following and express the result as a rational number:

(a) $(3/2)^{-3} \times (3/2)^{-2}$

(b) $(\frac{-5}{3})^6 \times (\frac{-5}{3})^{-4}$

(c) $\left\{6^{-1} + \left[\frac{3}{2}\right]^{-1}\right\}^{-1}$

(d) $(5^{-1} \div 3^{-1})^2 \times \left[\frac{27}{125}\right]^{-1}$

(e) $(5^{-1} - 7^{-1})^{-1} \div \left[\frac{7}{10}\right]$

(f) $\left[\left(\frac{2}{3}\right)^{-1} - \left(\frac{1}{2}\right)^{-1}\right]^{-1}$

(g) $(-2/5)^3 \div (-3/10)^4$

(h) $\{(1/2)^2 - (1/4)^3\} \times 2^3$

(i) $\{(3^2 - 2^2) \div (1/5)^2\}$

(j) $\{(5^2)^3 \times 5^4\} \div 5^7$

(k) $\frac{3 \times 7^6 \times 11^8}{21^6 \times 11^5}$

(l) $\frac{2^3 \times 3^4 \times 4}{3 \times 32}$

(m) $\frac{12^4 \times 9^3 \times 4}{6^3 \times 8^2 \times 27}$

(n) $\frac{3^5 \times 10^5 \times 25}{5^7 \times 6^5}$