

**I. Choose the best answer from the following options: (14 x 1 = 14)**

- $\frac{-5}{4}$  is a rational number which lies between \_\_\_\_\_  
(a) 0 and  $\frac{-5}{4}$  (b) -1 and 0 (c) -1 and -2 (d) -4 and -5
- $(\frac{3}{4} - \frac{5}{8}) + \frac{1}{2} =$  \_\_\_\_\_ (a)  $\frac{15}{64}$  (b) 1 (c)  $\frac{5}{8}$  (d)  $\frac{1}{16}$
- $\sqrt{48}$  is approximately equal to \_\_\_\_\_ (a) 5 (b) 6 (c) 7 (d) 8
- Area of an equilateral triangle is \_\_\_\_\_  
(a)  $\frac{\sqrt{3}}{4}a^2$  (b)  $\frac{1}{2}bh$  (c)  $\frac{1}{2} \times d_1 \times d_2$  (d)  $a^2$
- If the area of a square is  $36x^4y^2$  then, its side is \_\_\_\_\_  
(a)  $6x^4y^2$  (b)  $8x^4y^2$  (c)  $6x^2y$  (d)  $-6x^2y$
- If  $x^2 - y^2 = 16$  and  $(x+y) = 8$  then  $(x-y)$  is \_\_\_\_\_  
(a) 8 (b) 3 (c) 2 (d) 1
- One factor of  $x^3 + y^3$  is (a)  $(x - y)$  (b)  $(x + y)$  (c)  $(x + y)^3$  (d)  $(x - y)^3$
- 12% of 250 litre is the same as \_\_\_\_\_ of 150 litre.  
(a) 10% (b) 15% (c) 20% (d) 30%
- What is the marked price of a hat which is bought for ₹210 at 16% discount? (a) ₹243 (b) ₹176 (c) ₹230 (d) ₹250
- The number of conversion periods in a year, if the interest on a principal is compounded every two months is \_\_\_\_\_.  
(a) 2 (b) 4 (c) 6 (d) 12
- Two similar triangles will always have \_\_\_\_\_ angles.  
(a) acute (b) obtuse (c) right (d) matching.
- The hypotenuse of a right angled triangle of sides 12cm and 16cm is \_\_\_\_\_.  
(a) 28 cm (b) 20 cm (c) 24 cm (d) 21 cm
- How many outcomes can you get when you toss three coins once?  
(a) 6 (b) 8 (c) 3 (d) 2
- Two numbers are said to be co-prime numbers if their HCF is  
(a) 2 (b) 3 (c) 0 (d) 1

**II. Filling in the blanks :**

- The rational numbers  $\frac{-8}{3}$  and  $\frac{8}{3}$  are equidistant from \_\_\_\_\_.
- A cube has \_\_\_\_\_ faces.
- $(0, -5)$  point lie on \_\_\_\_\_ axis.
- If  $x\%$  of  $x = 25$ , then  $x =$  \_\_\_\_\_.
- In any triangle \_\_\_\_\_ sides are opposite to equal angles.
- If the sides of a triangle are in the ratio 5:12:13 then, it is \_\_\_\_\_

**III. Match the following :**

(5 x 1 = 5)

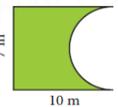
- |                                    |                                                       |
|------------------------------------|-------------------------------------------------------|
| 21. Area of a circle               | - (a) $\frac{1}{4} \pi r^2$                           |
| 22. Circumference of a circle      | - (b) $(\pi + 2)r$                                    |
| 23. Area of the sector of a circle | - (c) $\pi r^2$                                       |
| 24. Circumference of a semicircle  | - (d) $2\pi r$                                        |
| 25. Area of a quadrant of a circle | - (e) $\frac{\theta^\circ}{360^\circ} \times \pi r^2$ |

**IV. Two-mark Questions :**

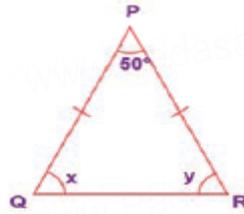
(10 X 2 = 20)

**(Answer any 10 Questions)**

- Compare  $\frac{3}{4}$  and  $\frac{5}{6}$
- Find the square root of 1156 by prime factorisation method.
- Find the number in standard form for the following expansions:  
 $8 \times 10^4 + 7 \times 10^3 + 6 \times 10^2 + 5 \times 10^1 + 2 \times 1 + 4 \times 10^{-2} + 7 \times 10^{-4}$
- For the sectors with given measures, find the length of the arc, area and perimeter. ( $\pi=3.14$ ) central angle  $45^\circ$ ,  $r = 16 \text{ cm}$
- Find the perimeter of the figures given below. ( $p = \frac{22}{7}$ )
- Find the central angle of each of the sectors whose measures are given below. ( $p = \frac{22}{7}$ ) area =  $462 \text{ cm}^2$ ,  $r = 21 \text{ cm}$
- Find the product of  $2x^2y^2$ ,  $3y^2z$  and  $-z^2x^3$ .
- Simplify  $\frac{3m^2}{m} + \frac{2m^4}{m^3}$
- The sum of two numbers is 36 and one number exceed another by 8. Find the numbers.
- Akila scored 80% of marks in an examination. If her score was 576 marks, then find the maximum marks of the examination.



36. If selling an article for ₹820 causes 10% loss on the selling price, then find its cost price.
37. A and B together can do a piece of work in 16 days and A alone can do it in 48 days. How long will B take to complete the work?
38. Find the value of  $x$  and  $y$  in the given figure.



(8 X 5 =40 )

**IV. Five-mark Questions :**  
(Answer any 8 Questions)

39. Arrange rational numbers in ascending and descending order.

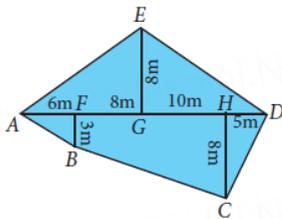
$$\frac{-17}{10}, \frac{-7}{5}, 0, \frac{-2}{4}, \frac{-19}{20}$$

40. Find the square root of 459684 by long division method.

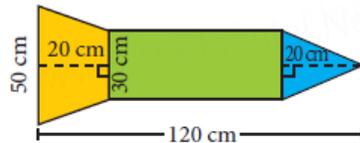
41. A circle is formed with 8 equal granite stones as shown in the figure each of radius 56 cm and whose central angle is  $45^\circ$ . Find the area of each of the granite stones. ( $\pi = \frac{22}{7}$ )



42. Find the area of the irregular polygon shaped fields given below.



43. A rocket drawing has the measures as given in the figure. Find its area.



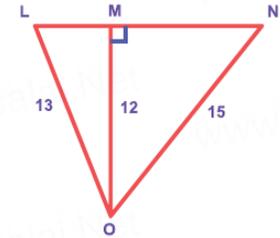
44.(i) Expand:  $(x+3)(x+5)(x+2)$  (ii) Factorise:  $x^2+yz+xy+xz$  [www.Padasalai.Net](http://www.Padasalai.Net)

45. Mother is five times as old as her daughter. After 2 years, the mother will be four times as old as her daughter. What are their present ages?

46. A number consists of two digits whose sum is 9. If 27 is subtracted from the original number, its digits are interchanged. Find the original number.

47. If the selling price of 10 rulers is the same as the cost price of 15 rulers, then find the profit percentage.

48. X, Y and Z can do a piece of job in 4, 6 and 10 days respectively. If X, Y and Z work together to complete, then find their separate shares if they will be paid ₹ 31000 for completing the job.



49. Find LM, MN, LN and also the area of  $\Delta$  LON

50. Soap factory produces 9600 soaps in 6 days working 15 hours a day. In how many days will it produce 14400 soaps working 3 more hours a day?

**V. Eight - mark Questions :** (1 X 8 =8 )

51. Construct a quadrilateral DEAR with  $DE=6$  cm,  $EA = 5$  cm,  $AR = 5.5$ cm,  $RD = 5.2$  cm and  $DA = 10$  cm. Also find its area.

[OR]

52. Construct the following rhombuses with the given measurements and also find their area. CAKE,  $CA=5$  cm and  $\angle A = 65^\circ$

**VI. Eight - mark Questions :** (1 X 8 =8 )

53. Draw a straight line by joining the points A  $(-2,6)$  and B  $(4,-3)$

[OR]

54. Draw the graph of the following equations,

(i)  $x = -7$  (ii)  $y = 6$

Kindl send me your district Questions & Keys to email Id - [Padasalai.net@gmail.com](mailto:Padasalai.net@gmail.com)