

இரண்டாம் தவணை மதிப்பீடு - 2017

7 ஷீயீய  
தரம் 7  
Grade 7

கணிதம்  
Mathematics

**சரஸ் தேவியே**  
இரண்டு மணித்தியாலங்கள்  
*Two Hours*

## PART I

1. Price of a pen is Rs. 12. Find the price of 9 such pens.

2. How many axis of symmetries are there for the letter S in English alphabet.

3.  $A = \{\text{Square numbers between 10 and 50}\}$  denote the set A in Venn diagram.

#### 4. Simplify

$$7 + 8 \times 2$$

5. Write the prime factors of 18.

6. Find the value of  $5x^3y$  when  $x = 2$  and  $y = 3$ .

7. Write the leap years between year 2098 and 2109.

8. Find the value  $(+8) + (-12.5)$

9. Write two examples for dynamic angles.

10. Select and write the greater fraction.

$$\frac{4}{7}, \frac{2}{5}$$

11. Write  $4\frac{3}{8}$  as a decimal number.

12. What is the co-efficient of the algebraic term in the expression  $5 - \frac{2x}{3}$

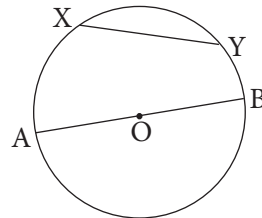
13. Describe the expression  $\frac{p}{5} - 4$ , in words.

14. How many 50g packets can be made out of 5.75kg of tea.

15. Centre of a given circle is O.

AB is a .....

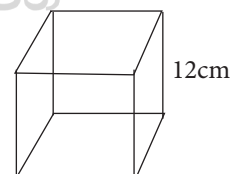
XY is a .....



16. L.C.M. and H.C.F of two whole numbers are 36 and 6 respectively. If one number is 12, find the other number.

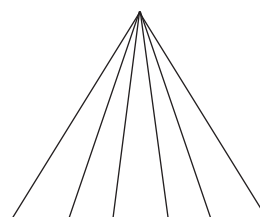
17. From 28m of wire Rohan used 13m 6cm of it. Find the length of the remaining wire.

18. Calculate the volume of a cube with 12cm side shown in the figure.



19. A motor cycle requires 2l 16ml fuel to travel a distance of 9km. Find how much fuel it requires to travel a distance of 1km.

20. How many triangles are there in the figure?



## PART II

- Write the answers for the **question number 1** and **four others** on a separate paper and attach it to the Part I.
- Question No 1 carries 16 marks and, all the others get 11 marks each.

1. Recall the lesson about equations and formulae

a) Write a difference between a simple equation and formulae.

b)

|              |
|--------------|
| $4x - 3$     |
| $3x + y = 7$ |
| $A = lb$     |
| $5x + 3 = 8$ |

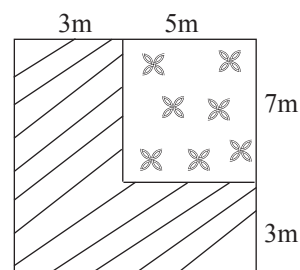
Select and write an example from the given box.

- i) an expression
  - ii) Simple equation
  - iii) Formulae
- c) i) Construct an equation to represent the information given below.
- When 18 is subtracted from seven times of a certain number  $x$ , the value obtained is 24.
- ii) Solve the above equation and find the value of the number  $x$ .
- d) i) The length and breadth of a rectangle are  $l$  and  $b$  respectively. Construct a formulae for its perimeter "P"
- ii) The length of a rectangle is 5 times of its breadth. If the perimeter of it is 72cm, find its length and breadth separately.

2. a) The perimeter of an equilateral triangle 16m 2cm. Find its length of a side.

b) The given figure shows a rectangular garden. In a side of it there is a rectangular flower bed and grass land on it's remainder.

- i) Find the area of the garden
- ii) Find the area of the flower bed.
- iii) Find the area of the grass land.
- iv) Find the perimeter of the grass land.



3. a) i) Draw a straight line segment  $AB = 6\text{cm}$ .  
 ii) Mark the midpoint of  $AB$  as  $O$ . Draw a circle with centre  $O$  and  $AB$  as diameter.  
 iii) Draw two parallel lines  $CD$  and  $FE$   $2\text{cm}$  away from  $AB$ , where  $C, D, F, E$  are the points on the circle.  
 iv) Join  $CDFE$  what is the special name to be given to  $CDFE$ .

4. The length, breadth and height of a cuboid shaped vessel are  $12\text{cm}$ ,  $10\text{cm}$ ,  $300\text{mm}$  respectively.

- i) Find the height in centimeters.  
 ii) Find the volume of the vessel in cubic centimeters.

There was  $2250\text{ml}$  of water in the vessel  $1\text{ l } 50\text{ml}$  of fruit juice is poured into the vessel to prepare fruit drink.

- iii) Find the Amount of fruit drink in the vessel.  
 iv) Above fruit drink is poured in equal amount into 33 tumblers. How many  $\text{ml}$  of drink will one tumbler contain.

5. a) Simplify the following.

i)  $\frac{3}{5} + \frac{1}{3}$

ii)  $3\frac{4}{9} - 1\frac{1}{18}$

b) Fill in the blanks using  $<$  or  $>$  appropriately.

i)  $\frac{2}{7}$  .....  $\frac{1}{3}$

c) Mohan spends  $\frac{3}{5}$  of his salary for food and  $\frac{3}{10}$  of his salary for transport. Find the total fraction he spent for food and transport.

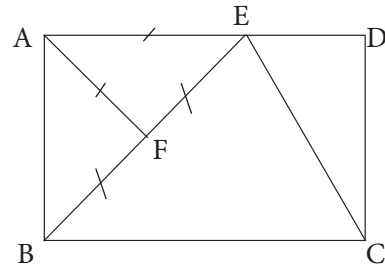
6. a) Fill in the blanks.

| Lengths of the sides of triangles | Types of Triangles based on sides |
|-----------------------------------|-----------------------------------|
| 10cm, 5cm, 8cm                    | .....                             |
| 8cm, 8cm, 8cm                     | .....                             |
| 4cm, 4cm, 3cm                     | .....                             |

b) If one angle is  $150^\circ$  that is ..... angled triangle.

c) ABCD is a rectangle. F is the midpoint of BE. Name the following using data in the figure.

- i) Right angled triangle
- ii) Isosceles triangle
- iii) Trapezium
- iv) Concave pentagon.



7. a) i) Write 24 as a product of two factors in all possible ways.

ii) Write all the factors of 24.

iii) Write the prime factor multiplier of 24.

iv) Write the prime factors of 24.

b) Find the L.C.M. of 18 and 24.

c) Find the H.C.F. of 18 and 24.

