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TOPICS: 1) INTEGERS
2) MENSURATION
3) ALGEBRA
4) RATIO

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1. Which integer is 5 more than -11?
   a) 6   b) -6   c) 16   d) -16

2. Distance covered along the boundary of a closed figure is called its
   a) area   b) perimeter   c) volume   d) polygon

3. 45 : 180 expressed in simplest form is
   a) 9 : 20   b) 1 : 4   c) 2 : 5   d) 2 : 3

4. Which of these is not an algebraic expression?
   a) 3p   b) 4y – 3   c) 4 × 3 – 2   d) $\dfrac{m}{5}$

5. Prateek runs an ice-cream parlour. He earns ☐ 3500 per month. He is able to save ☐ 1400 but spends the rest. Find the ratio of
   a) his income to his expenditure.
   b) his income to his saving.
   c) his expenditure to his saving.

6. In a class of 60, there are 24 girls and 36 boys. Find the ratio of
   a) the number of girls to the number of boys.
   b) the number of boys to the number of girls.
   c) the number of boys to the total number of students in the class.

7. Express the following ratios in simplest form.
   a) 40 minutes to 2 hours
   b) 50 paise to 4 rupees

8. Write a rule which represents the formation of following figures and the number of matchsticks used.

a)

b)
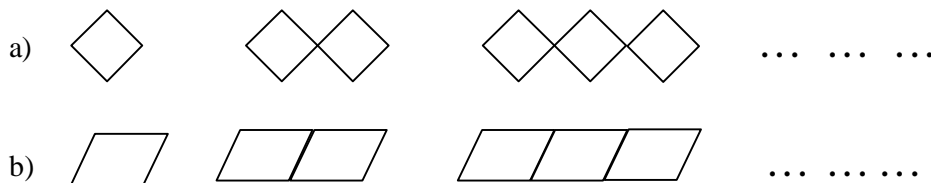
9. Priya's age is x years. Write an expression for
   a) her age after 8 years.
   b) her age 3 years ago.
   c) her sister's age who is twice Priya's age.
   d) her father's age is 7 years more than 3 times Priya's age. Find her father's age.

10. Solve the following equations using trial and error method.
    a) x – 2 = 4   b) 3m = 15

c) $\dfrac{m}{4} = 4$ d) $7 + b = 12$

11. Identify the operation in forming the expression and tell how the expression has been formed?
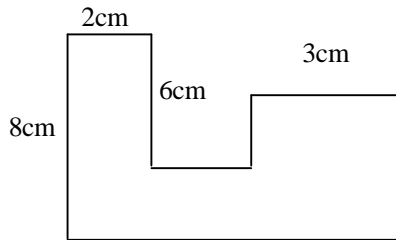
     a) $- 5 + 2$

     b) $3a - 13$

12. Change the following statements using expressions into statements in ordinary language.

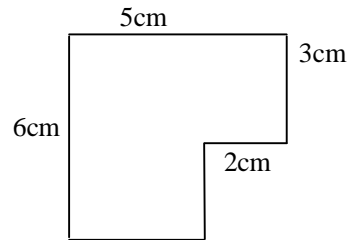   a) a pen costs ☐ p. A book costs ☐ 5p.

     b) Our class has n students. The school has 15n students.

     c) Satish ate x chocolates. He has 5x chocolates in his bag.

13. Find the area of the given figures.

     a)   b)

14. A room is 9m long and 6m20cm wide. How many square meters of carpet is needed to cover the floor of the room?

15. The area of a rectangular room which is 18m long is $270m^2$. Find the width of the room.

16. A path measuring 12m by 4m has been covered by square tiles. The side of the square tile is 40cm. Find the number of tiles required.

17. The length and breadth of a field are 35.5m and 24.5m respectively. Find the cost of fencing the the field at the rate of ☐ 15 per meter.

18. One side of a square field is 62m. Find the cost of raising a lawn on the field at the rate of ☐ 5 per square meter.

19. Abhijeet takes 2 rounds of a square park of side 125m and Narayan takes 3 rounds of a rectangular park of length 70m and breadth 45m. Who covers more distance?

20. Solve using number line

     a) $(-2) + 4 + (-3)$.

     b) 3 more than -7.

21. Simplify:

     a) $35 + (-1) + (-64) + (-8)$.

     b) $40 + (-33) + (-67) + (+65)$.

     c) $(-130) + 500 + (-150) - (100) - (-600)$.

22. Sum of two integers is – 29. If one of them is – 140, find the other number.

23. Temperature of Shimla on Monday was 4°C. It decreased by 2°C on Tuesday and increased by 3°C on Wednesday and then decreased by 5°C on Thursday. What was the temperature on Thursday

24. Arrange in ascending order.

     a) -10, 0, 8, 5, 10, - 4, 7, - 8.

     b) – 701, 117, -170, 171, -107, -711.

25. In a quiz competition, team A scored - 10, 5, -2, 8, 4, -3 and team B scored 7, -6, -3, 6,- 4, 4 in six successive rounds. Which team scored more and by how much?