CBSE Board
Class VII Mathematics
Term II
Sample Paper 2

Time: 2 ½ hours   Total Marks: 80

General Instructions:

1. **All** questions are **compulsory**.
2. **Section A** comprises of **12** questions carrying 1 mark each.
3. **Section B** comprises of **12** questions carrying 2 marks each.
4. **Section C** comprises of **8** questions carrying 3 marks each.
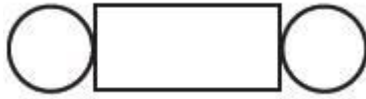5. **Section D** comprises of **5** questions carrying 4 marks each.

Section A
(Questions 1 to 12 carry 1 mark each)

1. 56% is equal to the decimal number
   A. 5.60
   B. 0.56
   C. 56.0
   D. 0.056

2. Which of the following rational numbers is in the standard form?
   A. $\dfrac{15}{-63}$
   B. $\dfrac{36}{25}$
   C. $\dfrac{-8}{30}$
   D. $\dfrac{24}{33}$

3. A triangle has _____ components.
   A. 3
   B. 4
   C. 5
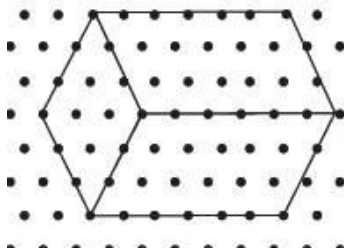   D. 6

4. Name the solid, whose net is shown below:

    A. Cylinder
    B. Cone
    C. Sphere
    D. Rectangle

5. Which of the following is an example of binomial?
    A. $3x$
    B. $-x + 1$
    C. $2x^2 + x + 1$
    D. $x^4 + x - 1$

6. $\dfrac{16}{25}$ in exponential form is

    A. $\dfrac{4^3}{5^2}$

    B. $\dfrac{4^2}{5^3}$

    C. $\dfrac{2^4}{5^2}$

    D. $\dfrac{2^3}{5^2}$

7. English alphabet "Z" has rotational symmetry of order _____.
    A. 2
    B. 1
    C. 4
    D. 3

8. The length of following cuboid is:

    A. 3 units
    B. 2 units
    C. 6 units
    D. 4 units

9. $\dfrac{11^{10}}{11^6} =$

    A. 10^{16}

    B. 10^4

    C. 11^{16}

    D. 11^4

10. Rhombus has a perimeter of 28 cm, then what will be the length of its side?

    A. 7 cm

    B. 4 cm

    C. 16 cm

    D. 14 cm

11. $(128 \div 32) \div (-4) =$

    A. -1

    B. 2

    C. -3

    D. -4

**12.** The first step that we will use to separate variables and constants in the linear equation $2x + 3 = 7$ is

    A. Transposing 3 to RHS

    B. Transposing 7 to LHS

    C. Diving both sides by 2

    D. Multiplying both sides with 3

Section B
(Questions 13 to 24 carry 2 marks each)

13. Rahul has got 40 marks out of 50 in his math exam while Rohan has got 75 out of 100. Who scored more marks?
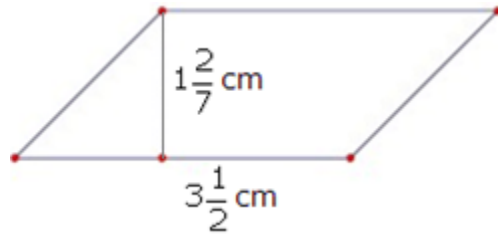
14. Find the missing values in the number line below:
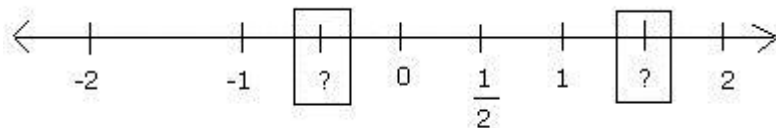
15. Is it possible to construct a triangle with the following given elements? Why or why not?

    a) $\angle A = 120°$, $\angle B = 90°$ and AB = 8 cm.

    b) $\angle P = 90°$, $\angle Q = 90°$ and PQ = 9 cm.

16. Find the area of the given parallelogram.

$1\frac{2}{7}$ cm

$3\frac{1}{2}$ cm

17. Add the following expressions:

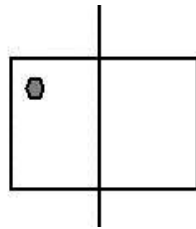6m - 7n - 5p, -4m - 9n + 6p, -4m - 9n + 6p

18. Write the following in expanded form:
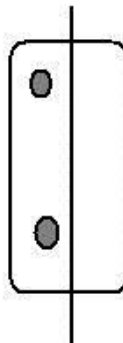
(i) $\left(\frac{-7}{9}\right)^3$

(ii) $\left(\frac{5}{8}\right)^6$

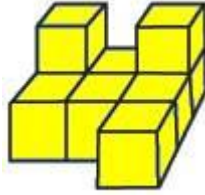**19.** Given the line of symmetry, find the other hole(s) in the following figures.

i.

ii.

20. Draw a cuboid of dimensions 5 units x 3 units x 6 units on an isometric dot sheet.

21. Mass of earth is approximately 5,970,000,000,000,000,000,000,000 kg. Express this mass in standard form.

**22.** Count the number of cubes in the following solid.

23. In a cricket match, the runs scored by 11 players are as follows:
12, 23, 10, 77, 15, 78, 90, 54, 23, 10 and 1
Find the average score.

24. Find the value of the following expression using suitable property:
725 × (-35) + (-725) × 65

Section C
(Questions 25 to 32 carry 3 marks each)

25. If $\dfrac{1}{2}$ of $\dfrac{-3}{4}$ of a number is 6, what is the number?

26. A shopkeeper sells one transistor for Rs. 840 at a gain of 20% and another for Rs. 960 at a loss of 4%. What is his total gain or loss percent?

27. Draw a right angled triangle in which hypotenuse is of length 5 cm and one side of length 3 cm. Also measure the length of third side.

28. Explain ASA congruence condition with the help of a diagram.

29. A small square is located inside a bigger square as shown in the figure below. The length of one side of the small square is 3 cm and the length of one side of the big square is 7 cm. What is the area of the shaded region?

7 cm
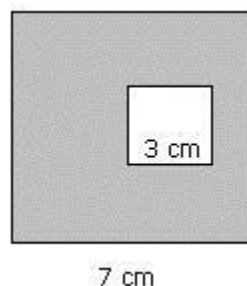
30. A sum of Rs. 12,500 amounts to Rs. 15,500 in 4 years at a rate of simple interest. What is the rate of interest?

31. In the figure given below, a circle is inscribed inside another circle. The radius of the outer circle is 12 cm and that of the inner circle is 7 cm. Find the area of the shaded portion between the circles.
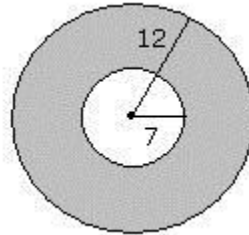
32. Find the coefficient of x in each of the following options:
  i. $(2 - z)x$
  ii. $z^3y + 2x$
  iii. $x^3y + 2xy + 1$

Section D
(Questions 33 to 37 carry 4 marks each)

33. Draw a triangle PQR, where PQ = 5.7 cm, $\angle P = 45^o$ and $\angle Q = 30^o$.

34. Multiply $(3a + 3b)$ by $(2a - 2b)$. Verify the result for a = 2 and b= (-2).

35. The perimeter of a square is same as that of the rectangle. Find the side of the square if the dimensions of the rectangle are 10 m × 8 m.

36. Simplify: $20x - [15x^3 + 5x^2 - \{8x^2 - (4 - 2x - x^3) - 5x^3\} - 2x]$.

37. A bag has 12 balls coloured yellow, blue, green and red. The number of balls of each colour is the same. A ball is drawn from the bag. Calculate the probability of drawing a yellow ball, a blue ball, a green ball and a red ball.