

**Goa Board**  
**Class VII Mathematics**  
**Sample Paper - 5**

**Time: 3 hours**

**Total Marks: 90**

---

**General Instructions:**

1. All questions are **compulsory**.
  2. The question paper consists of **38** questions and it is divided into **four sections: A, B, C and D**.
  3. **Section A** comprises of **12** questions carrying 1 mark each.
  4. **Section B** comprises of **8** questions carrying 2 marks each.
  5. **Section C** comprises of **10** questions carrying 3 marks each.
  6. **Section D** comprises of **8** questions carrying 4 marks each.
  7. Question numbers **1 to 12** in **Section A** are multiple choice questions where you are to select **one** correct option out of the given four.
- 

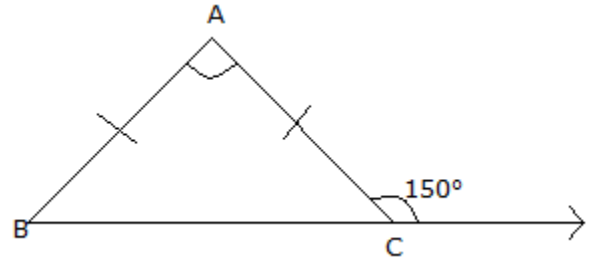
**Section A**

**(Questions 1 to 12 carry 1 mark each)**

1.  $(128 \div 32) \div (-4) =$ 
  - A. -1
  - B. 2
  - C. -3
  - D. -4
2. If the cost one pencil is Rs 2.40, then the cost of 10 such pencils is:
  - A. Rs. 24
  - B. Rs. 240
  - C. Rs. 10
  - D. Rs. 100
3. Median of 11, 10, 12, 4, 9, 18 and 6 is \_\_\_\_\_.
  - A. 11
  - B. 10
  - C. 4
  - D. 9

4. The first step that we will use to separate variables and constants in the linear equation  $2x + 3 = 7$  is
- Transposing 3 to RHS
  - Transposing 7 to LHS
  - Diving both sides by 2
  - Multiplying both sides with 3

5. In the following diagram, measure of angle A is
- $60^\circ$
  - $100^\circ$
  - $120^\circ$
  - $150^\circ$

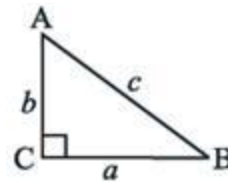


6. The cost of petrol is increased by 12%, find the increased amount if the cost is Rs. 54 per liter.
- Rs 6.50
  - Rs 6.48
  - Rs 6.58
  - Rs 6.00

7. Multiplicative inverse of  $2\frac{2}{3}$  is

- $\frac{8}{3}$
- $\frac{-8}{3}$
- $\frac{3}{8}$
- 1

8. In the following figure, the relation between side lengths a, b and c is given by:
- $a^2 = b^2 + c^2$
  - $b^2 = a^2 + c^2$
  - $c^2 = a^2 - b^2$
  - $c^2 = a^2 + b^2$



9. The area of a parallelogram of dimension  $18 \text{ cm} \times 12 \text{ cm}$  is  $144 \text{ cm}^2$ . The height of this parallelogram along the longer side is given by one of the following option:
- 12 cm
  - 8 cm
  - 9 cm

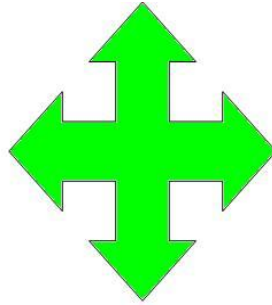
- D. 18 cm
10. The expression  $21b - 32 + 7b - 20b$  on simplification gives one of the following expressions:
- A.  $8b + 32$
  - B.  $8b - 32$
  - C.  $32 - 8b$
  - D.  $24b$
11. 4200 when expressed as product of prime numbers is.
- A.  $2^3 \times 5^3 \times 3^5 \times 7$
  - B.  $2^3 \times 3 \times 5^2 \times 7$
  - C.  $2^2 \times 3^2 \times 5^2 \times 7^2$
  - D.  $2^3 \times 3^4 \times 5^2 \times 7^2$
12. A square has an angle of rotation of \_\_\_\_.
- A.  $50^\circ$
  - B.  $180^\circ$
  - C.  $90^\circ$
  - D.  $60^\circ$

### Section B

(Questions 13 to 20 carry 2 marks each)

13. 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.
14. In a factory, 9.2 kilograms of pumpkin pie filling is made per minute. How many kilograms of pie filling will be made in 6 minutes?
15. Sam's truck gets him  $10\frac{2}{3}$  miles per gallon. Suppose the tank is empty and he puts  $5\frac{1}{2}$  gallons of diesel, how far can Sam go with his truck?
16. Explain ASA congruence condition with the help of a diagram.
17. If 40% of a number is equal to two-third of another number, what is the ratio of the first number to the second number?
18. Find the circumference of a circular disc with diameter 9 cm.
19. Subtract  $3x - 4y$  from  $4x - 3y$ .

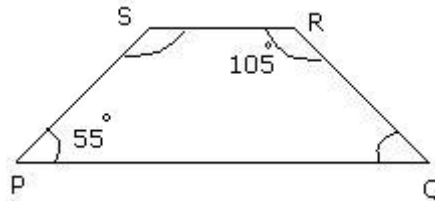
20. Draw the lines of symmetry in the following diagram. Also, write the order of rotational symmetry.



**Section C**

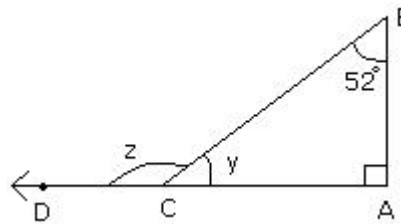
(Questions 21 to 30 carry 3 marks each)

21. In the quadrilateral given below,  $SR \parallel PQ$ .  $SP$  and  $RQ$  are the pair of transversals cutting  $SR$  and  $PQ$ . Find  $\angle PSR$  and  $\angle RQP$ .



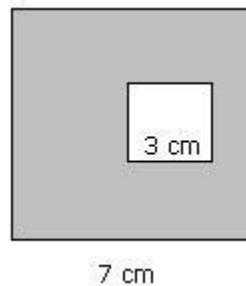
22. Two equal sides of a triangle are each 5 less than twice the third side. Perimeter of triangle is 55 m. Find the length of its sides.

23. From the figure given below, find  $\angle y$  and  $\angle z$ .



24. Rahul walks  $\frac{2}{5}$  km from a point A, towards north and then from there  $1\frac{1}{2}$  km towards south. At what position will he be from point A?

25. 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?
26. Draw a triangle ABC of any measure and hence draw a line parallel to BC through A.
27. 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?



28. A poultry farm produces 600 eggs every week and delivers them equally to 10 shops. The shopkeepers charge Rs. 5 for every good egg but they have to give Rs. 2 to the customer if the egg comes out to be rotten. A shopkeeper could only earn Rs. 276 despite selling all the eggs. How many eggs were rotten?
29. Find the coefficient of  $x$  in each of the following options:  
 (i)  $(2 - z)x$   
 (ii)  $z^3y + 2x$   
 (iii)  $x^3y + 2xy + 1$
30. A man buys a cycle for Rs. 1400 and sells it at a loss of 15%. What is the selling price of the cycle?

### Section D

**(Questions 31 to 38 carry 4 marks each)**

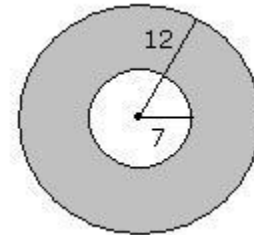
31. Below are the numbers of goals scored in 1998 by the top five scorers on each of the three National Hockey League teams. Use this information to complete the chart.

Team	Goals	Goals	Goals	Goals	Goals	Mean	Median	Mode
India	35	25	30	19	19			
Sril Lanka	45	25	14	13	14			

China	32	18	14	21	21			
-------	----	----	----	----	----	--	--	--

32. Draw a triangle PQR, where  $PQ = 5.7$  cm,  $\angle P = 45^\circ$  and  $\angle Q = 30^\circ$ .
33. Town A is 60 km from town B, and 61 km from town C. A road connects towns B and C directly. Find the length of this road.
34. The percentage profit earned by selling an article for Rs. 1920 is equal to the percentage loss incurred by selling the same article for Rs. 1280. At what price should the article be sold to make 25% profit?

35. 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.



36. On Sunday, a coffee shop sold  $4\frac{7}{12}$  pitchers of caffeinated coffee and  $3\frac{1}{4}$  pitchers of decaffeinated coffee. How many pitchers of coffee did the coffee shop sell in all?
37. Multiply  $(3a + 3b)$  by  $(2a - 2b)$ . Verify the result for  $a = 2$  and  $b = (-2)$ .
38. The length of a rectangle is 6cm more than its breadth. If the perimeter of the rectangle is 96 cm, then find the length and breadth of the rectangle.