

CBSE Board
Class VIII Mathematics
Term II
Sample Paper - 1

Time: 2 hour

Total Marks: 50

General Instructions:

1. All questions are **compulsory**.
2. The question paper consists of **28** questions and it is divided into **three sections** A, B and C.
3. **Section A** comprises of **10** questions carrying 1 mark each.
4. **Section B** comprises of **14** questions carrying 2 marks each.
5. **Section C** comprises of **4** questions carrying 3 marks each.
6. Question numbers **1 to 10** 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 10 carry 1 mark each)

1. $103 \times 97 =$
A. $100^2 - 3^2$
B. $100^2 \times 3^2$
C. $100^2 + 3^2$
D. None
2. A football is an example of:
A. Circle
B. Prism
C. Pyramid
D. Sphere
3. The area of a rhombus and that of a square are equal. The side of the square is 6 cm. If one of the diagonal of the rhombus is 4 cm, then the length of its other diagonal is ____.
A. 8 cm
B. 10 m
C. 18 cm
D. 15 m
4. 27^{12} can also be expressed as ____
A. 3^{36}
B. 6^{12}
C. 3^{42}
D. 9^{10}

5. If 24 men can do a piece of work in 28 hours, in how many hours will 16 men do it?

- A. 60 hours
- B. 72 hours
- C. 56 hours
- D. 42 hours

6. $a^2 - 2ab + b^2$

- A. $(a - 2b)^2$
- B. $(a - b)^3$
- C. $(a - b)^2$
- D. $(a + b)^2$

7. Which of the following points lie on the graph of "y = x"?

- A. (1, 2)
- B. (2, 1)
- C. (2, 2)
- D. (0, 1)

8. Which of the following number is divisible by 5 and 10 both?

- A. 45
- B. 405
- C. 450
- D. 412

9. The expression $\left(\frac{1}{2}x + \frac{4}{3}y\right)\left(\frac{1}{2}x - \frac{4}{3}y\right)$ is equivalent to the expression

A.	$\frac{1}{2}x^2 - \frac{4}{3}y^2$
B.	$\frac{1}{2}x^2 + \frac{4}{3}y^2$
C.	$\frac{1}{4}x^2 - \frac{16}{9}y^2$
D.	$\frac{1}{4}x^2 + \frac{16}{9}y^2$

10. Number of edges in the following shape is:



- A. 8
- B. 10
- C. 12
- D. 9

Section B

(Questions 11 to 24 carry 2 marks each)

11. Verify the identity $(a + b)^2 = a^2 + 2ab + b^2$; for $a = 3$ and $b = -4$.

12. Write the following numbers in generalized form.

- (i) 45
- (ii) 123

13. Find the height of cuboid whose volume is 800 cm^3 , length is 20 cm and breadth is 10 cm.

14. Two dices are rolled and the faces obtained are 4 and 6. Find the sum of the numbers on their opposite faces.

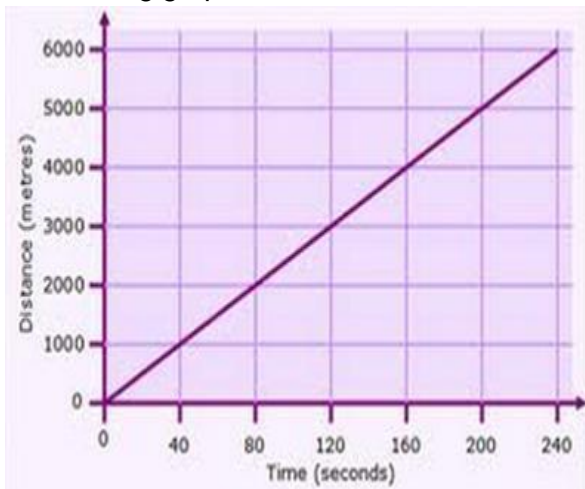


15. In the following table, does x and y vary directly with each other?

x	5	7	9	11
y	15	21	36	33

16. If $6x$ pens cost Rs $12x^2 - 36x$, find the cost of one pen.

17. The following graph shows the relation between time and distance.

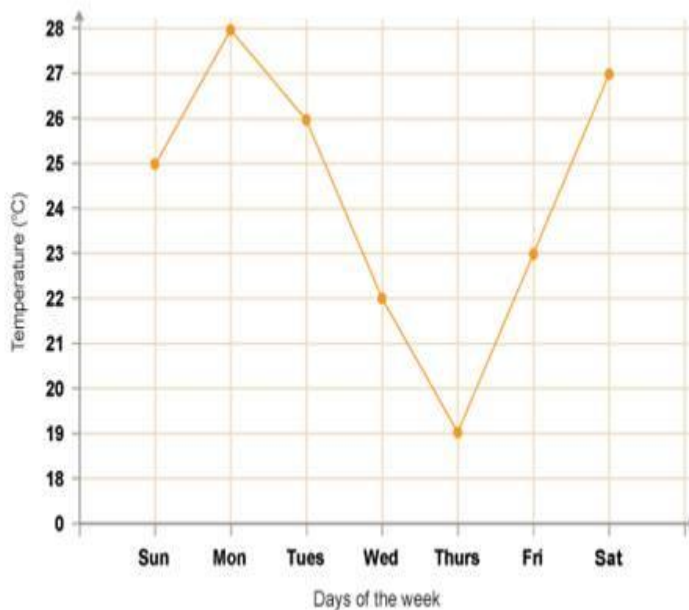


Study the graph and answer the following questions.

- (a) Find the distance covered in 80 seconds.
 - (b) The distance 5000 m is covered in what time?
18. Make 3 numbers from the digits 3, 5 and 1 taken in order, add them and verify that the sum is divisible by 37.
19. Using law of exponents, express each of the following as a rational number with positive exponents:
- (i) $(2^5 \div 2^8) \times 2^{-7}$
 - (ii) $\left[\left(\frac{3}{2}\right)^{-2}\right]^3$
20. If $x + y = 4$ and $xy = 2$, find $x^2 + y^2$.
21. Without actual division, find which of the following numbers are divisible by 2. 521, 250, 4634, 4578, 125, 25478
22. A polyhedron is having 8 vertices and 12 edges. Find the number of faces in this polyhedron.
23. Mass of earth is approximately 5,970,000,000,000,000,000,000 kg. Express this mass in standard form.
24. Factorise the following expression:
- $$20a^2b + 30abc$$

Section C
(Questions 25 to 28 carry 3 marks each)

- 25.** The capacity of a cuboidal tank is 50000 liters of water. Find the depth of tank if the length and breadth of the tank are 2.5 m and 10 m.
- 26.** 40 boys earn Rs 2000 in 20 days, how much will 50 boys earn in 24 days?
- 27.** Verify: Dividend = Divisor x Quotient + Remainder for following:
 Dividend: $4z^3 + 8z^2 + 8z + 7$
 Divisor: $2z^2 - z + 1$
- 28.** Following graph shows the temperature in week days. Study the graph and answer the following questions.



- (a) Which was the coldest day and what was the temperature on that day?
- (b) What was the temperature on Monday?
- (c) On which day the temperature was 26°C ?