

B.Pany
13/10/25

BHARTIYA SHIKSHA BOARD
Model Paper – Half yearly
MATHEMATICS - Class 7
Session 2025-26

Time: 3 Hours

Max Marks: 80

Instructions:

- Read the questions carefully.
- Please check that this question paper contains **04** printed pages.
- **10** minutes extra time is allowed to read this question paper. During this time, students will only read the question paper and not write the answer.
- Attempting all the questions is compulsory.
- This question paper contains **38** questions.
- This question paper comprises of four sections **A, B, C and D**.
Section A: Q.no. **1** to **20**, each question carries **1** mark.
Section B: Q.no. **21** to **27**, each question carries **2** marks.
Section C: Q.no. **28** to **36**, each question carries **4** marks.
Section D: Q.no. **37** to **38**, each question carries **5** marks.
- There is no overall choice in this question paper. However, an internal choice has been given in 2 questions of 2 marks each and 2 questions of 4 marks each. You have to attempt only one of the choices in such questions.

Section-A

1. What is the value of $(-5) + 7$.
(a) 12 (b) -12 (c) 2 (d) -2
2. Baudhayana theorem is analogous to which other Mathematician.
(a) Thales theorem (b) Pascals theorem
(c) Pythagoras theorem (d) Fundamental theorem of algebra
3. The number **100** is known as
(a) Dasa (b) Shata (c) Sahasra (d) none of these
4. The sum of two integers is always an integer, this is called:
(a) Commutative property (b) Closure property
(c) Associative property (d) Distributive property
5. The word 'Shunya' crossed boundaries for Arab countries and was used as 'sifr' around which century?
(a) 2nd century CE (b) 10th century CE
(c) 4th century BCE (d) 6th century CE
6. When **13** is multiply by **0.03** the result is
(a) 0.039 (b) 0.39 (c) 0.09 (d) 39

7. Subtract 3 from y gives 1.

- (a) $y + 12 = 18$ (b) $y - 3 = 1$ (c) $3 - y = 1$ (d) $y - 1 = 3$

8. A linear pair of angle are also _____ angles.

- (a) Opposite (b) adjacent (c) common (d) none of these

9. Complementary angle of 49° is

- (a) 41° (b) 45° (c) 90° (d) 100°

10. Three or more lines intersecting at a point are called _____ lines.

- (a) Concurrent (b) parallel (c) intersecting (d) transversal

11. Write the additive inverse of (-3).

12. Represent the $-\frac{8}{5}$ on the number line.

13. Convert decimal (-2.05) into a rational number.

14. Fill in the blank:

- (a) Vertically opposite angles are always _____.
(b) The angles 27° and 63° are called _____ angles.

15. If two angles of a triangle are 30° and 60° . Find the third angle of triangle.

16. Write the coefficient of the variable x in $42xyz - 7y + 13$.

17. Express 729 as the power of 3.

18. Add: $4xy$, $8xy$ and $-5xy$

19. Statement (S): If a, b and c are rational numbers, then $(a \div b) \div c = a \div (b \div c)$.

Reason(R): If a rational number is divided by another non-zero rational number, the result is a rational number.

- (a) Both (S) and (R) are true (b) Both (S) and (R) are false
(c) (S) is false but (R) is true (d) (S) is true but (R) is false

20. Statement (S): Product of $(x+2)$ and $(x+3)$ is x^2+6x+5 .

Reason(R): Product of two binomials may be a trinomial.

- (a) Both (S) and (R) are true (b) Both (S) and (R) are false
(c) (S) is false but (R) is true (d) (S) is true but (R) is false

Section-B

21. Which one is greater:

- (a) $3^2 \times 2^3$ or $2^2 \times 3^3$ (b) 2×10^5 or $2^5 \times 10$

22. Subtract: $72a - 38b$ from $2b - 8a + 13$

23. Triangle is an isosceles triangle with $AB=AC$, If angle B is 35° . Find the other two angles.

24. Solve the equation: $15+7y = 71$.

25. Find the value : $[-\frac{11}{7} + (-\frac{3}{4})] \div (-\frac{1}{7})$

Or

Find the four rational number between -4 and -3.

26. Multiply: (a) 1.07×2.3 (b) 30.8×0.0

27. Write True or False, for the following statements.

(a) Integer are closed under subtraction.

(b) addition of two negative integers may result in a positive integer.

Or

Isha bought 2.5 metre of cloth at the rate of ₹32.74 per metre. Find the cost of the cloth.

Section-C

28. Fill in the blanks:

(a) $\frac{3}{4}$ of a dozen of bananas = _____ bananas.

(b) $\frac{11}{12}$ of an hour = _____ minutes.

29. Complete the pattern:

(a) 7, 4, 1, -2, _____, _____

(b) -6, -3, 0, 3, _____, _____

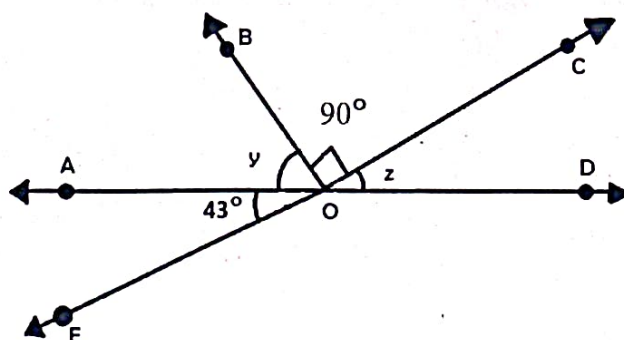
30. Verify $x+(y+z) = (x+y)+z$ for $x=\frac{2}{3}$, $y=-\frac{1}{4}$, $z=\frac{1}{3}$.

Or

The product of two rational numbers is $\frac{15}{14}$. If one of the rational number is $-\frac{5}{4}$, find the other rational number.

31. The perimeter of a parallelogram is 64 cm while one of its side measures 19 cm. find its adjacent side.

32. Find the value of y and z in the following figure.



33. Shruti finished $\frac{4}{7}$ part of her project work while Anu finished $\frac{3}{8}$ part. Who has finished more and by what fraction?

Or

Two supplementary angles are in the ratio of 2:3. Find the measure of each angle.

34. A ladder 5m long reaches a ventilator of house 4m above the ground. Determine the distance of the foot of the ladder from the wall.

35. Simplify:

(a) $(2x-7y) - (5x-9y)$

(b) $(22p - 8q^2) - (-8p - 19q^2)$

36. Simplify: $\frac{53 \times 32 \times 25}{42 \times 50}$

Section-D

Case study questions:

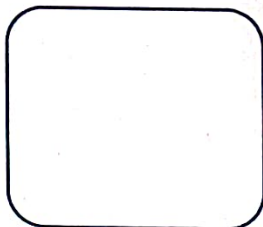
37. Mr. Kunal, a mathematics teacher, asked four students of his class to write some algebraic expression in one variable on the board, which of the following given equations will be written on the board, after which, the board will look like this:

A. $2x - 3$

B. $8 - 3x$

C. $7x - 15$

D. $11 - 6x$



- (a) He asked Sonika to equate the expression 'A' to 9 and solve it. What solution did she get?
- (b) He asked Karan to equate expression 'B' to 11 and check if $x=-1$ is a solution.
- (c) He asked Jaya to equate 'C' and 'D' and solve it. What solution did she get?

38. As a part of home work project, Suman and Rohan collect some facts about the cells in human blood

Radius of RBC: 0.0000036 mm

Diameter of WBC: 0.00016 cm

Radius of Neutrophils: 5.5×10^{-5} dm

- (a) Express the radius of RBC in standard form.
- (b) Express the diameter of WBC in standard form.
- (c) Express the radius of Neutrophils in general form.

Or

What is the radius of WBC.