

Bhavan's Tripura Vidyamandir
1st Periodic Assessment : (2025-2026)

Class:- 8

Time:- 2 Hours

Name of the student :

Subject: Mathematics

Total : 50 Marks

Roll: Sec:

General Instructions-

- SECTION – A: Question No. 1 to 5 carries 1 mark each.
- SECTION –B: Question No. 6 to 10 carries 2 mark each
- SECTION – C: Question No. 11 to 16 carries 3 marks each.
- SECTION – D: Question No. 17 to 19 carries 4 marks each.
- SECTION – E: Question No. 20 carries 5 marks. **(CASE STUDY)**

SECTION -A

1. The product of two rational numbers is always a ____.
a) Whole number. b) Rational number c) Integer d) none
2. For all rational numbers a, b and c, $a(b + c) = ab + \underline{\hspace{2cm}}$
a) ab b) bc c) ac d) none
3. Which of the following is not a linear equation in one variable?
a) $2x + 5 = 55$ b) $7x + 20 = 69$ c) $8(x+y)=0$ d) $5x=2x+24$
4. The HCF of 12x, 36 is :
a) x b)12 c) 6 d) 12x
5. The degree of the polynomial $7x^2y - 3x^8y^3 + 8x^3y^5 + y^8$
a) 8 b) 9 c) 10 d) 11

SECTION - B

6. Carry out the multiplication of the expressions of the following pair.
(i) $(4p)$, $(q + r)$
7. Solve:- (i) $5t - 3 = 3t - 5$
8. Add (i) $5m(3 - m)$ and $(6m^2 - 13m)$
9. Represent the rational numbers on the number line (using pencil and scale)-
(i) $-5/6$ and $7/6$
10. Factorise : $14pq + 35pqr$

SECTION - C

11. Solve the following equations and check your results.
(i) $3x = 2x + 18$
12. Find the volume of rectangular box with given length, breadth and height respectively:-
(i) $2ax, 3by, 5cz$ (ii) $2q, 4q^2, 8q$ **(1.5 + 1.5)**
13. Solve the linear equations:-
(i) $5x + \frac{7}{2} = \frac{3x}{2} - 14$
14. Factorise. (i) $x^2 + x y + 8x + 8y$ (ii) $15 xy - 6x + 5y - 2$ **(1.5 + 1.5)**
15. Divide : $(10x - 25) \div (2x - 5)$
16. Find three rational numbers between -3 and -4 .

SECTION - D

17. Factorise the expressions and divide them as directed.
(i) $(y^2 + 7y + 10) \div (y + 5)$
18. Simplify and solve :
 $15(y - 4) - 2(y - 9) + 5(y + 6) = 0$
19. Simplify: $3x(4x-5)+3$ and find its value for :-
(i) $x = 3$. (ii) $x = 0$

SECTION - E (Case Study)

Rita wants to build a rectangular garden in her backyard. She decides the length of the garden will be $(x + 7)$ meters and the breadth will be $(x - 4)$ meters. She wants to do a few calculations to estimate the area and cost of fencing. Based on the above information answer the following questions:-

- i. Write an algebraic expression for the area of the garden in terms of x.
- ii. Write an algebraic expression for the perimeter of the garden in terms of x
- iii. Expand the expression for the area.
- iv. Mention the algebraic identity used for finding the area.
- v. If the value of x is 5, find the actual area of the garden