Grade 9 - First Unit Test

Practice Paper 1

Mathematics

Based on Maharashtra Board Syllabus (NEP 2025-26) - 1st Quarter

Instructions:

- Duration: 1 hour
- Maximum marks: 20
- All questions are compulsory
- Show all your working clearly

Section A: Sets and Real Numbers (8 Marks)

1. Answer the following: **[4 marks]**

a) Write the set of prime numbers between 10 and 20 using the listing method. = _____

b) If A = {1, 2, 3, 4, 5} and B = {3, 4, 6, 7}, find A ∪ B. = _____

c) If P = {x | x is an even number, 1 < x < 10}, write P using the listing method. = _____

d) Is every rational number a real number? (Yes/No) = _____

2. Answer the following: **[4 marks]**

a) Write 0.7 in p/q form. = _____

b) Write 2/5 in decimal form. = _____

c) Simplify: √16 + √9 = _____

d) Find the value of |-5|. = _____

Section B: Polynomials (6 Marks)

3. Answer the following: **[3 marks]**

a) Write the degree of the polynomial $5x^3 + 2x^2 - 7$. = _____

b) Add the polynomials: $(2x^2 + 3x) + (x^2 - x)$ = _____

c) Subtract the polynomial (y - 5) from (3y + 2). = _____

4. Multiply the following polynomials: **[3 marks]**

a) 3x(x + 4) = _____

b) (a + 2)(a + 3) = _____

c) (y - 1)(y + 5) = _____

Section C: Parallel Lines and Transversal (6 Marks)

5. In the given figure (assume lines m and n are parallel and t is a transversal): **[3 marks]**

[Imagine two parallel lines m and n intersected by a transversal t. Angles are numbered 1-8. Assume angle 1 is top-left on line m, angle 2 is top-right on m, angle 3 is bottom-left on m, angle 4 is bottom-right on m, angle 5 is top-left on n, angle 6 is top-right on n, angle 7 is bottom-left on n, angle 8 is bottom-right on n.]

If ∠1 = 70°, find the measure of:

a) ∠5 (Corresponding angle) = _____ °

b) ∠4 (Alternate interior angle) = _____ °

c) ∠8 (Consecutive interior angle to ∠1's adjacent angle on line m) = _____ °

6. Answer the following geometry questions: **[3 marks]**

a) If a pair of alternate exterior angles are equal, are the two lines parallel? (Yes/No) = _____

b) If ∠A and ∠B form a linear pair and ∠A = 120°, find ∠B. = _____ °

c) Draw a rough sketch of two parallel lines intersected by a transversal and mark a pair of alternate interior angles.

End of Practice Paper 1