Grade 8 - 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: Rational and Irrational Numbers (8 Marks)

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

a) Write the rational number for "negative five-sevenths". = _____

b) Convert 0.4 into a rational number (fraction in simplest form). = _____

c) Is √2 a rational number? (Yes/No) = _____

d) Write two rational numbers between 1/2 and 3/4. = _____, _____

2. Solve the following operations on rational numbers: **[4 marks]**

a) Add: (-3/5) + (1/10) = _____

b) Subtract: 7/8 - 1/4 = _____

c) Multiply: (-2/9) × (3/4) = _____

d) Divide: (5/6) ÷ (-10/18) = _____

Section B: Parallel Lines and Transversal (6 Marks)

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

a) If two parallel lines are intersected by a transversal, what is the relationship between consecutive interior angles? = _____

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

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

4. 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. 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 = 75°, find the measure of:

a) ∠5 (Corresponding angle) = _____ °

b) ∠3 (Vertically opposite to ∠1) = _____ °

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

Section C: Squares and Cube Roots (6 Marks)

5. Find the square or square root: **[3 marks]**

a) Find the square of 15. = _____

b) Find the square root of 144. = _____

c) Is 225 a perfect square? (Yes/No) = _____

6. Find the cube or cube root: **[3 marks]**

a) Find the cube of 4. = _____

b) Find the cube root of 27. = _____

c) Is 100 a perfect cube? (Yes/No) = _____

End of Practice Paper 1