Half Yearly Mock Test 4

Subject: Mathematics

Full marks: 80

Time: 90 minutes

Date: 08/08/2025

Section A (Each question carries 3 marks)

1) Evaluate: (-15) + [(-8) - (-3)] × (-2)

2) The temperature in a city was -5°C at midnight. By noon, it had risen by 12°C and dropped again by 8°C in the evening. What was the evening temperature?

3) Simplify using distributive property: (-7) × 15 + (-7) × 5

4) Write 3 2/5 as an improper fraction and multiply by 5/12.

5) Subtract: 4 1/2 - 2 2/3.

6) The distance between two cities is 84 2/3 km. If a car covers 2/9 of the distance in the first hour, how far has it travelled?

7) Divide: 56.25 ÷ 0.75.

8) The daily wages of 8 workers (in ₹) are: 350, 400, 450, 400, 350, 500, 450, 400. Find the mean wage.

9) Draw all lines of symmetry for a regular hexagon.

10) Solve: 4(2x - 3) = 20.

11) A number is such that twice it increased by 7 gives 19. Find the number.

12) Solve: (2y / 5) + 3 = 7.

13) Write 0.000256 in standard form.

14) Express 1/64 as a power of 4.

15) The population of a city is 2.5 × 10^6. It increases by 3 × 10^5 in a year. Express the new population in standard form.

Section B (Each question carries 5 marks)

1) A mountaineer starts from a base camp at an altitude of 2,400 m. On the first day, he climbs 850 m, then descends 320 m due to weather, and finally climbs another 675 m before camping for the night. The next day, he descends 1,120 m and then climbs 1,540 m. What is his final altitude? Use the appropriate integer operations to solve.
2) A man walks 2/5 of his journey, cycles 1/3 of it, and travels the remaining 18 km by car. Find the total length of the journey.
3) A person earns ₹ 23,475.50 per month. He spends ₹ 7,685.75 on food, ₹ 6,240.25 on rent, ₹ 2,150.50 on transport, and the rest is saved. Find his annual savings.
4) The marks of 15 students in science are: 45, 60, 50, 55, 65, 70, 60, 55, 50, 60, 65, 70, 75, 65, 60. Find the mean, median, and mode.
5) Draw and name all lines of symmetry for a regular hexagon. Also find its order of rotational symmetry.
6) A rectangular park is twice as long as it is wide. The perimeter is 180 m. Find its dimensions and area.
7) The mass of one grain of sand is 6.5 x 10^(-6) kg. Find the total mass of 1.25 x 10^7 such grains in standard form.