BRAINYCHALKS

CBSE CLASS X – MATHEMATICS

Minor Assessment – 42 Date – 03rd November 2026

Time: 2 Hours Maximum Marks: 40

SECTION A – Multiple Choice Questions (6 × 1 = 6 marks)

1. Three numbers in A.P. have the sum 30. What is its middle term?

(a) 4 (c) 16

(b) 10 (d) 8

2. A system of two linear equations in two variables is inconsistent, if the lines in the graph are:

(a) coincident (c) intersecting at one point

(b) parallel (d) intersecting at right angles.

3. The pair of equations $y = 2$ and $y = -3$ has:

(a) one solution (c) infinitely many solutions

(b) two solutions (d) no solution.

4. The degree of a polynomial having zeroes –3 and 4 only is:

(a) 2 (c) more than 3

(b) 1 (d) 3.

5.The number of polynomials having zeroes –3 and 5 is:

(a) only one (c) exactly two

(b) infinite (d) at most two.

6. Two A.P.s have the same common difference. The first term of one of these is –1 and that of the other is –8. Then the difference between their 4th terms is:

(a) 1 (c) 8

(b) 7 (d) 9

SECTION B – Very Short Answer Questions (4 × 2 = 8 marks)

7. Find the sum of the first 100 natural numbers.

8. Find the sum of the first 8 multiples of 3.

9. Solve by elimination: $3x = y + 5$ and $5x - y = 11$.

10. Write the quadratic equation whose roots are 2 and –5.

SECTION C – Short Answer Questions (4 × 3 = 12 marks)

11. Find the values of x and y from the following pair of linear equations:$62x + 43y = 167$ & $43x + 62y = 148$

12. If the sum of the first 7 terms of an A.P. is 49 and that of its first 17 terms is 289, find the sum of its first 20 terms.

13. In a 2-digit number, the digit at the unit's place is 5 less than the digit at the ten's place. The product of the digits is 36. Find the number.

14. If the zeroes of a polynomial $x^2 + (a + 1)x + b$ are 2 and –3, then determine the values of a and b.

SECTION D – Long Answer Questions (2 × 5 = 10 marks)

15. The sum of four consecutive numbers in A.P. is 32 and the ratio of the product of the first and last terms to the product of the two middle terms is 7 : 15. Find the numbers.

16. Two people are 16 km apart on a straight road. They start walking at the same time. If they walk towards each other with different speeds, they will meet in 2 hours. Had they walked in the same direction with the same speeds as before, they would have met in 8 hours. Find their walking speeds.

SECTION E – Case-Based Question (1 × 4 = 4 marks)

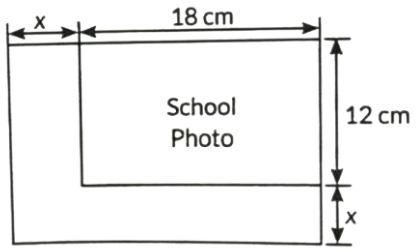
17. While designing the school year book, a teacher asked the student that the length and width of a particular photo is increased by x units each to double the area of the photo. The original photo is 18 cm long and 12 cm wide.

Based on the above information, answer the following questions:

(i) Write an algebraic equation depicting the above information.

(ii) Write the corresponding quadratic equation in standard form.

(iii) What should be the new dimensions of the enlarged photo?



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