

MP Board Class 10 Mathematics Standard Question Paper(Memory Based)

Time Allowed :3 Hours	Maximum Marks :70	Total questions :37
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General Instructions

Read the following instructions very carefully and strictly follow them:

1. Answers to this Paper must be written on the paper provided separately.
2. You will not be allowed to write during the first 15 minutes
3. This time is to be spent in reading the question paper.
4. The time given at the head of this Paper is the time allowed for writing the answers,
5. The paper has four Sections.
6. Section A is compulsory - All questions in Section A must be answered.
7. You must attempt one question from each of the Sections B, C and D and one other question from any Section of your choice.
8. The intended marks for questions or parts of questions are given in brackets [].

1. Find the HCF and LCM of 6 and 20 by the prime factorization method.
2. Find a quadratic polynomial where the sum and product of zeroes are -3 and 2 respectively.
3. Solve the pair of linear equations $x + y = 5$ and $2x - 3y = 4$ using the elimination method.
4. Check whether -150 is a term of the A.P.: $11, 8, 5, 2, \dots$

- 5. Find the coordinates of the point which divides the join of $(-1, 7)$ and $(4, -3)$ in the ratio $2 : 3$.**
- 6. Prove that $3 + 2\sqrt{5}$ is an irrational number.**
- 7. Find the roots of the quadratic equation $2x^2 - 7x + 3 = 0$ using the quadratic formula.**
- 8. How many multiples of 4 lie between 10 and 250?**
- 9. Prove that the lengths of tangents drawn from an external point to a circle are equal.**
- 10. State and prove the Basic Proportionality Theorem (Thales' Theorem).**
- 11. A toy is in the form of a cone of radius 3.5 cm mounted on a hemisphere of the same radius. The total height of the toy is 15.5 cm. Find the total surface area of the toy.**