

**Bihar Board Class 10 Higher Mathematics(Elective) Question
Paper(Memory Based)**

Time Allowed :3 Hours

Maximum Marks :70

Total questions :37

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. If $540 = 2^x \times 3^y \times 5^z$, find the value of $x + y - z$.

2. Which of the following is an irrational number? (A) 2.3, (B) $\sqrt{13} \times \sqrt{13}$, (C) $\sqrt{441}$

3. Find the HCF of m and n if both are prime numbers.

4. What is the value of $\sin 90^\circ + \cos 0^\circ$?

5. Find the distance of point $P(3, 4)$ from the origin.

6. What is the degree of the polynomial $(x + 3)(x - 8)$?

- 7. Find the HCF of 36, 54, and 90 using the prime factorization method.**
- 8. Find the zeroes of the polynomial $2x^2 - 6$.**
- 9. Solve the pair of linear equations $4x - 5y = 20$ and $3x + 5y = 15$ using the graphical method.**
- 10. State and prove the Pythagoras Theorem.**
- 11. The difference of squares of two numbers is 180. If the square of the smaller number is 8 times the larger number, find both numbers.**