



Baselios Public School

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Surprise Test, A.Y: 2025-26

Standard: Class 10

Date: 01/01/2026

Subject: Mathematics

Marks: 50

Time: 60 minutes

Section A - Multiple Choice Questions

5 marks

Q1. HCF(18, 48):

- A. 3
- B. 6
- C. 9
- D. 12

Q2. A polynomial of degree 1 is called:

- A. linear
- B. quadratic
- C. cubic
- D. constant

Q3. Every non-terminating repeating decimal is:

- A. Rational
- B. Irrational
- C. Prime
- D. Real

Q4. Sum of zeroes of $x^2 - 3x + 2$ is:

- A. -3
- B. 3
- C. 1
- D. 5

Q5. Euclid's division lemma states $a=bq+r$ where:

- A. q
- B. $0 \leq r$
- C. $r > q$
- D. $b > r$ always false

Section B - Short Answer Questions

10 marks

Q1. Use Euclid's division lemma to find HCF of 135 and 225.

Q2. Why does $x^2 + 4$ have no real zeroes?

Q3. Find decimal expansion type of $17/2$.

Q4. Find zeroes of $(x - 1)(x - 3)$.

Q5. Find HCF of 50, 65, 85.

Section C - Long Answer Questions

15 marks

Q1. Express 441 as prime factorisation and comment on its nature.

Q2. Explain factual result: A degree n polynomial has at most n zeroes.

Q3. Find HCF of 1015 and 385 using Euclid division.

Q4. Find quadratic polynomial whose zeroes are -4 and 3 and verify sum/product.

Q5. Show that $\sqrt{7}$ is irrational.

Section D - Case Study Questions

20 marks

Q1. A vendor has 108 and 135 apples.

- (a) Find greatest number of identical groups.
- (b) Apples per group?

Q2. A quadratic polynomial cuts x-axis at (-2,0) and (6,0).

- (a) Form polynomial.

Q3. A student finds $\sqrt{2}$ irrational.

- (a) State method used.
- (b) What happens if $\sqrt{2} = p/q$?

Q4. A drone flight path: $h(x) = x^2 - 5x + 6$.

- (a) Find landing points on ground level.

Q5. Company A lights blink every 10 seconds and B every 15 sec.

- (a) Least time when both blink together?
- (b) Explain using LCM.