Indira Institute Of Mathematics

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Class 10
Real number, polynomial and Linear equations

1.5 hours **40 Marks**

SECTION A(2 mark)

1. what is the prime factor denominators of the 34.12345?
2. Find the HCF of the 963 and 657 using prime factor method?
3. If -4 is a zero of the polynomial $x^2 - x - (2K + 2)$ then find the K?
4. If $ax^2 - 7x + c$ has 14 as the sum of the zeros and also as the product of the zero, Find the value of a and c?
5. Find the value of K so that the lines $2x - 3y = 9$ and $kx - 9y = 18$ will be parallel?
6. Find the point of the intersection of line $-3x + 7y = 3$ with x axis

SECTION B(3 mark)

7. A rectangular courtyard is 18m 72cm long and 13m 20cm broad. It is to paved with square tiles of the same size. Find the least possible number of the such square tiles required?
8. If m and n are the zero of the polynomials $3x^2 + 11x - 4$, find the value of $\frac{m}{n} + \frac{n}{m}$?
9. If the Zeros of the polynomial $x^2 + px + q$ are double in valve to the zeros of the polynomial $2x^2 - 5x - 3$. Find the value of p and q?
10. Check whether given pair of lines is consistent of not $5x - 1 = 2y$, $y = \frac{-1}{2} + \frac{5}{2}x$?

SECTION C(4 mark)

11. Prove that $3 + 2\sqrt{5}$ is irrational?
12. Find the other zeros of the polynomial $p(x) = 2x^4 + 7x^3 - 19x^2 - 14x + 30$ if its zeros are $\frac{3}{2}$ and -5
13. Students of a class are made to stand in rows. If one student is extra in rows, there would be 2 rows less if one student is less in row there would be 3 rows more. Find the number of the students in the class
14. Solve for x and y

$$x + y = a + b$$
$$ax - by = a^2 - b^2$$