



INDIAN SCHOOL SOHAR
PERIODIC TEST – 1(2018 – 19)
MATHEMATICS

Class: X

MAX. MARKS: 20

Date: 17-05-2018

DURATION: 45MTS

General Instructions:

- a. All questions are compulsory.**
b. Section A comprises 3 questions of 1 mark each, Section B comprises 2 questions of 2 marks each, Section C comprises 3 questions of 3 marks each and Section D comprises 1 question of 4 marks.

SECTION A

1. HCF and LCM of a and b are 19 and 152 respectively. If $a = 38$, find b.
2. For what value of "k", do the equations $2x - 3y = 1$ and $kx + 5y = 7$, represent intersecting lines.
3. Find a quadratic polynomial whose zeros are $\sqrt{5}$ and $-\sqrt{5}$.

SECTION B

4. On dividing $x^3 - 3x^2 + x + 2$ by a polynomial $g(x)$, the quotient and remainder, are $x - 2$ and $-2x + 4$, respectively. Find $g(x)$.
5. Find the HCF of 30, 72 and 432 by Euclid's method.



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SECTION A

1. HCF and LCM of a and b are 9 and 22338 respectively. If $a = 306$, find b.
2. For what value of "k", do the equations $4x + y = 3$ and $8x + 2y = 5k$, represent coinciding lines.
3. Find a quadratic polynomial whose zeros are $\sqrt{3}$ and $-\sqrt{3}$.

SECTION B

4. Find the HCF of 24, 40 and 36 by Euclid's method.
5. On dividing $y^3 - 3y^2 + y + 2$ by a polynomial $g(y)$, the quotient and remainder, are $y - 2$ and $-2y + 4$, respectively. Find $g(y)$.

SECTION C

6. Prove that $5 + 2\sqrt{3}$ is irrational.
7. Solve for x and y: $152x - 378y = -74$ and $-378x + 152y = -604$
8. If the square of the difference of the zeroes of the quadratic polynomial $f(x) = x^2 + px + 45$ is equal to 144, find the value of p.

OR

If sum of the squares of zeros of the quadratic polynomial $f(x) = x^2 - 8x + p$ is 40, find the value of "p".

SECTION D

9. A sailor goes 8km downstream in 40 minutes and returns in 1hour .Find the speed of the Sailor in still water and speed of the current.

OR

The sum of the digits of a two digit number is 9.The number obtained by reversing the order of digits of the given number exceeds the given number by 27.Find the number.

SECTION C

6. Prove that $2 + 3\sqrt{5}$ is irrational.
7. If sum of the squares of zeros of the quadratic polynomial $f(x) = x^2 - 8x + p$ is 40, find the value of "p".

OR

If the square of the difference of the zeroes of the quadratic polynomial $f(x) = x^2 + px + 45$ is equal to 144,find the value of p.

8. Solve for x and y : $-378x + 152y = -604$ and $152x - 378y = -74$

SECTION D

9. Rohit can row downstream 20km in 2 hours, and upstream 4km in 2 hours. Find his speed of rowing in still water and the speed of the current.

OR

The sum of a two digit number and the number obtained by reversing the digits is 66.If the digits of the number differ by 2,find the number.
