

INDIAN SCHOOL SOHAR
FORMATIVE ASSESSMENT- I
SUBJECT: MATHEMATICS

SET-I

CLASS: X

MARKS: 20

DATE: 07. 05. 14

TIME: 45 minutes

GENERAL INSTRUCTIONS:

- *All questions are compulsory.*
- *The question paper consists of 9 questions divided into 4 sections A,B,C and D. Section A comprises of 3 questions of 1 mark each, section B comprises of 2 questions of 2 marks each, section C comprises of 3 questions of 3 marks each and section D comprises of 1 question of 4 marks.*

SECTION A

1. Find the decimal expansion of the rational number $\frac{11}{2^4 \times 5^3}$ (without actually performing long division).
2. If one zero of $6x^2 + 3x + k$ is reciprocal to the other, then find value of k.
3. Find the smallest number which when increased by 15 is exactly divisible by 100 and 20.

SECTION B

4. Use Euclid's division algorithm to find the HCF of 1648 and 4052.
5. Prove that $n^2 - n$ is divisible by 2 for every positive integer n.

SECTION C

6. Prove that $3 - 2\sqrt{3}$ is an irrational number.
7. If α and β are the zeroes of the quadratic polynomial $f(x) = x^2 - 3x - 2$, find a quadratic polynomial whose zeroes are $\frac{\beta}{\alpha}$ and $\frac{\alpha}{\beta}$.
8. Find the LCM and HCF of 26, 51 and 91 by using fundamental theorem of arithmetic.

SECTION D

9. Find all the zeroes of the polynomial $2x^4 - 3x^3 - 5x^2 + 9x - 3$, if two of its zeroes are $\sqrt{3}$ and $-\sqrt{3}$.

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