

INDIAN SCHOOL SOHAR
FORMATIVE ASSESSMENT- II
SUBJECT: MATHEMATICS

SET-II

CLASS: X
DATE: 11.08. 15

MARKS: 20
TIME: 40 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.
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SECTION – A

1. Form the pair of linear equations in the following problem; the age of the father is 3 years more than three times the son's age. 3 years hence, the age of the father will be 10 years more than twice the age of the son.
2. Find the value of "c" for which the pair of equations $cx - y = 2$ and $6x - 2y = 4$ will have infinitely many solutions .
3. Let $\Delta ABC \sim \Delta DEF$ and their areas be, 25 cm^2 and 36cm^2 respectively. If $DE = 2.4\text{cm}$, find AB.

SECTION – B

4. Prove that the diagonals of a trapezium divide each other in the same ratio.
5. Solve ; $23x - 29y = 98$, $29x - 23y = 110$.

SECTION – C

6. Prove that the area of an equilateral triangle described on one side of a square is equal to half the area of the equilateral triangle described on one of its diagonal.
7. Solve graphically: $x - y - 1 = 0$, $2x + y = 8$. Shade the region bounded by the lines and the y- axis.
8. Prove that, if a line is drawn parallel to one side of a triangle to intersect the other two sides in distinct points, the other two sides are divided in the same ratio.

SECTION – D

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