

**INDIAN SCHOOL SOHAR**  
**FORMATIVE ASSESSMENT- II**  
**SUBJECT: MATHEMATICS**

**SET-I**

**CLASS: X**  
**DATE: 11.08. 15**

**MARKS: 20**  
**TIME: 40 minutes**

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**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; Father's age is three times the sum of his two children. After 5 years his age will be twice the sum of ages of two children.
2. For what value of " k " do the following pair of linear equations  $3x - y + 8 = 0$  and  $6x - ky = - 16$ , represent coincident lines ?
3. Let  $\Delta ABC \sim \Delta DEF$  and their areas be,  $169 \text{ cm}^2$  and  $121\text{cm}^2$  respectively. If  $BC = 26\text{cm}$ , find EF.

**SECTION – B**

4. Prove that the line drawn from the mid-point of one side of a triangle, parallel to another side, bisects the third side.
5. Solve:  $\sqrt{2}x - \sqrt{3}y = 0$ ,  $\sqrt{5}x - \sqrt{2}y = 0$

**SECTION – C**

6. Solve graphically:  $x + y + 1 = 0$ ,  $3x + 2y = 12$ . Shade the region bounded by the lines and the x-axis.
7. 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.
8. 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.

**SECTION – D**

9. 8 men and 12 boys can finish a piece of work in 10 days while 6 men and 8 boys can finish it in 14 days, find the time taken by one man alone and that by one boy alone to finish the work.