

INDIAN SCHOOL SOHAR
FORMATIVE ASSESSMENT - III
MATHEMATICS

Class: X

Date: 06/11/13

Time: 45 Mts

Marks: 25

General Instructions

1. All questions are compulsory.
2. The question paper consists of 11 questions divided into four sections A, B, C and D. Section A comprises of 3 questions of one mark each, section B comprises of 4 questions of 2 marks, section C comprises of 2 questions of 3 marks each, and section D comprises 2 questions of four marks.

SECTION - A

1. The 19th term of an AP exceeds the 10th term by 45. Find the common difference of an AP
2. If the third term of an AP is 19 and the fifth term of an AP is 31, which term is 60 more than 54th term?
3. If 'm' and 'n' are the roots of the equation $x^2 + nx + m = 0$, find the value of m and n

SECTION - B

4. Solve $abx^2 + b^2x - acx - bc = 0$
5. Find a number such that its square is 21 more than four times the original number
6. The angles of a quadrilateral are in AP. The greatest angle is double the smallest angle. Find all the four angles
7. Which term of the sequence 48, 43, 38, is the first negative term?

SECTION - C

8. If the sum of first n terms of an AP is $\frac{n}{2}(3n + 5)$, what is the value first and the 11th term?
9. For what value of 'p' the quadratic equation $(p+1)x^2 - 3(p-1)x - (p-1) = 0$ has two equal roots.

SECTION - D

10. An express train takes 1 hour less than a passenger train to travel 132 km between Mysore and Bangalore (without taking into consideration the time they stop at intermediate stations). If the average speeds of the express train is 11 km/h more than that of the passenger train find the average speed of the two trains.
11. In a potato race, a bucket is placed at the starting point, which is 5 m from the first potato, and the other potatoes are placed 3 m apart in a straight line. There are ten potatoes in the line. A competitor starts from the bucket, picks up the nearest potato, runs back with it, drops it in the bucket, runs back to pick up the next potato, runs to the bucket to drop it in, and she continues in the same way until all the potatoes are in the bucket. What is the total distance the competitor has to run?
