AB's Paths, Kolhapur

Sub: Maths Class: 8th Time: 1hr 30 min Marks: 40

Test: Square And Square Root

SECTION - A

Questions 1 to 6 carry 1 mark each

1. How many natural numbers lie between 5^2 and 6^2 ?

(a) 9

(b) 10

(c) 11

(d) 12

2. A square board has an area of 144 square units. How long is each side of the board?

(a) 11 units

(b) 12 units

(c) 13 units

(d) 14 units

3. If one member of a Pythagorean triplet is 2m , then the other two members are

(a) m, m^2+1

(b) m^2+1, m^2-1

(c) m^2, m^2-1

(d) $m^2, m+1$

4. The hypotenuse of a right triangle with its legs of lengths 3x and 4x is

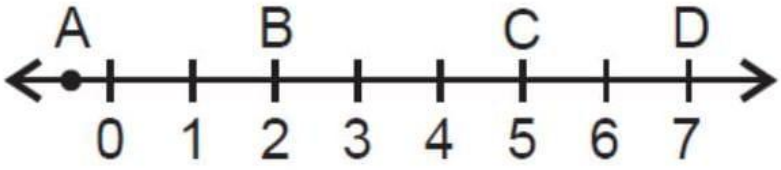
(a) 5x

(b) 7x

(c) 16x

(d) 25x

5. Which letter best represents the location of $\sqrt{25}$ on a number line?



(a) A

(b) B

(c) C

(d) D

6. In the below question, a statement of Assertion (A) is followed by a statement of Reason (R). Mark the correct choice as

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Assertion (A): Between 50 and 60, the perfect square number is 54.

Reasons (R): A perfect square is a number that can be expressed as the product of an integer by itself or as the second exponent of an integer.

(a) Both A and R are true and R is the correct explanation of A

(b) Both A and R are true but R is not the correct explanation of A

(c) A is true but R is false

(d) A is false but R is true

SECTION - B

Questions 7 to 9 carry 2 marks each

7. Find the value of $\sqrt{248+\sqrt{52+\sqrt{144}}}$
8. Find the side of a square whose area is equal to the area of a rectangle with sides 6.4 m and 2.5 m.
9. What is the least number that should be subtracted from 1385 to get a perfect square ? Also find the square root of the perfect square.

SECTION - C

Questions 10 to 13 carry 3 marks each

10. Rahul walks 12 m north from his house and turns west to walk 35 m to reach his friend's house. While returning, he walks diagonally from his friend's house to reach back to his house. What distance did he walk while returning ?
11. There are 500 children in a school. For a P.T. drill they have to stand in such a manner that the number of rows is equal to the number of columns. How many children would be left out in this arrangement.
12. Write Pythagorean triplet of 18.
13. Find the least number that must be added to 1500 so as to get a perfect square. Also find the square root of the perfect square.

SECTION - D

Questions 14 to 16 carry 4 marks each

14. Find the smallest square number which is exactly divisible by 4,9 and 10 . Also find the square root of the square number.
15. If the area of a square picture is 20.25 cm^2, find the length of its side.
16. A gardener has 1000 plants. He wants to plant these in such a way that the number of rows and the number of columns remain the same. Find the minimum number of plants he needs more for this. Also find the number of rows and the number of columns.

SECTION - E (Case Study Based Question)

Question 17 carry 4 mark

17. During dance practice in school 6570 students of different schools are arranged in rows such that the number of students in each row is equal to the number of rows. In doing so, the instructor finds out that few children are left out.

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(a) How many students were left out of the arrangement? (1)

(b) What is the number of students forming a square? (1)

(c) Find the number of children in each row of the square. (2)

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