



# ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION



CLASS 8

SUBJECT :Arithmetic

Work sheet 6 answer key  
SQUARES AND SQUARE ROOTS

Marks:15

Date:12.4.2020

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**Answer all the following questions(1×15=15)**

1. Square of an even number is always
  - (a) even
  - (b) odd
  - (c) even or odd
  - (d) none of these

Solution:

Square of an even number is always even. (a)

2.

$\sqrt{208} + \sqrt{2304}$  is equal to

- (a) 18
- (b) 16
- (c) 14
- (d) 22

Solution:

$$\begin{aligned} & \sqrt{208 + \sqrt{2304}} \\ &= \sqrt{208 + 48} \\ &= \sqrt{256} = 16 \end{aligned} \quad (b)$$

$$\begin{array}{r} 16 \\ 1 \overline{) 256} \\ \underline{1} \phantom{6} \\ 156 \\ \underline{156} \\ \phantom{00} \times \end{array} \quad \begin{array}{r} 48 \\ 4 \overline{) 2304} \\ \underline{16} \phantom{04} \\ 704 \\ \underline{704} \\ \phantom{000} \times \end{array}$$

3.

$\sqrt{0.0016}$  is equal to

- (a) 0.04
- (b) 0.004
- (c) 0.4
- (d) none of these

Solution:

$$\begin{aligned} & \sqrt{0.0016} = 0.04 \\ & \begin{array}{r} 0.04 \\ 04 \overline{) 0.0016} \\ \underline{16} \\ \phantom{000} \times \end{array} \end{aligned}$$

4. The smallest number by which 75 should be divided to make it a perfect square is

- (a) 1
- (b) 2
- (c) 3
- (d) 4

Solution:

$$75 = 3 \times 5 \times 5$$

Factor 3 is unpaired

$\therefore$  By dividing 75 by 3, we get a perfect square of 5.

5. Question 9.

$\sqrt{3 + \frac{6}{25}}$  is equal to

(a)  $\frac{5}{9}$

(b)  $\frac{4}{5}$

(c)  $\frac{9}{5}$

(d)  $\frac{5}{4}$

Solution:

$$\sqrt{3\frac{6}{25}} = \sqrt{\frac{81}{25}} = \frac{\sqrt{81}}{\sqrt{25}}$$

$$= \frac{9}{5} = 1\frac{4}{5} \quad \text{(c)}$$

6. The smallest number by which 162 should be multiplied to make it a perfect square is

(a) 4

(b) 3

(c) 2

(d) 1

Solution:

$$162 = 2 \times 3 \times 3 \times 3 \times 3$$

For 2 is left unpaired. So, by multiplying 162 by 2, we get a perfect square.

∴ Required least number to be multiplied = 2 (c)

7. If the area of a square field is 961 unit<sup>2</sup>, then the length of its side is

(a) 29 units

(b) 41 units

(c) 31 units

(d) 39 units

Solution:

$$\text{Area of a square} = 961 \text{ unit}^2$$

$$\therefore \text{Its side} = \sqrt{961} \text{ unit} = 31 \text{ unit (c)}$$

$$\begin{array}{r} 31 \\ 3 \overline{) 961} \\ \underline{9} \phantom{1} \\ 61 \\ 61 \\ \underline{61} \\ 0 \end{array}$$

8. The smallest number that should be subtracted from 300 to make it a perfect square is

- (a) 11
- (b) 12
- (c) 13
- (d) 14

Solution:

300

Taking the square root of 300,  
we see that 11 is left unpaired.

∴ 11 be subtracted. (a)

$$\begin{array}{r} 17 \\ 1 \overline{) 300} \\ \underline{1} \\ 200 \\ \underline{189} \\ 11 \end{array}$$

9. Given that  $\sqrt{1521} = 39$ , the value of  $\sqrt{0.1521} + \sqrt{15.21}$  is

- (a) 42.9
- (b) 4.29
- (c) 3.51
- (d) 35.1

Solution:

$$\begin{aligned} \sqrt{1521} &= 39, \text{ then value of } \sqrt{0.1521} + \sqrt{15.21} \\ &= 0.39 + 3.9 = 4.29 \text{ (b)} \end{aligned}$$

10. If a number has digits ..... in the unit's place, then its square ends in 11

- (a) 1,9
- (b) 2,3
- (c) 4,6
- (d) 7,8

Solution: a)

11. Number of zeros in the end of the square of 400 is .....

- (a) 5
- (b) 4
- (c) 2
- (d) 6

Solution: b)

12. A number ending in an even number of .....is always a perfect square.

(a) 2' s

(b) 0' s

(c) 3' s

(d) 1' s

Solution: b) , 500 is not a perfect square

13. Square of an odd number is always an ..... number.

(a) prime

(b) even

(c) odd

(d) none of these

Solution: c)

14. Square of any ..... number can be expressed as the sum of two consecutive natural numbers

(a) odd

(b) prime

(c) even

(d) none of these

Solution: a)

15. Square of an even number is always

(a) negative

(b) even

(c) odd

(d) none of these

Solution: b)

