

Class 8

Mathematics Worksheet

Chapter 6 – Squares and square roots

Very short answers type questions

Q1. Write a Pythagorean triplet whose one number is

- a) 6
- b) 14
- c) 16

Q2. How many non-perfect squares are there between the squares of the two consecutive natural numbers n and $(n + 1)$?

Q3. Write each of the following as the sum of two consecutive natural numbers

- a) 11^2
- b) 19^2

Q4. Write down the correct number in the box

- a) $25^2 - 24^2 = \square$
- b) $371^2 - 370^2 = \square$

Short answer type questions

Q5. Find the smallest perfect square number divisible by each one of the numbers 8, 9 and 10.

Q6. Find the smallest 6 digit number which is a perfect square.

Q7. Find the greatest 5 digit number which is a perfect square.

Q8. Find the least number that must be added to 1720 so as to get a perfect square.

Q9. Find the least no. which must be subtracted from 6459 to make it a perfect square.

Long answer type questions

Q10. A gardener has 1000 plants. He wants to plant these in such a way that no. of rows and the no. of columns remains the same. Find the minimum no. of plants he needs more for this.

Q11. The area of a square field is 1476225 sqm. A motorist travels along its boundary at 36 km/hr. In how much time, will he return to the start point?

Q12. Find

- a) $\frac{\sqrt{0.2304} + \sqrt{0.1764}}{\sqrt{0.2304} - \sqrt{0.1764}}$
- b) $\frac{\sqrt{0.4761} + \sqrt{0.3969}}{\sqrt{0.4761} - \sqrt{0.3969}}$

Q13. Find the square root of 176.0929

Q14. Simplify

a) $\frac{\sqrt{49} + \sqrt{225}}{\sqrt{64} + \sqrt{289}}$

b) $\frac{\sqrt{1024} + \sqrt{576}}{\sqrt{484} - \sqrt{36}}$

c) $\sqrt{980} \times \sqrt{1620}$

Answers

1. a) $\langle 6, 8, 10 \rangle$ b) $\langle 4, 48, 50 \rangle$ c) $\langle 16, 63, 65 \rangle$
2. $2n$
3. a) $60 + 61$ b) $180 + 181$
4. a) 49 b) 741
5. 3600
6. 100489
7. 99856
8. 42
9. 59
10. 24
11. 8 min 6 sec
12. a) 15 b) 22
13. 13.27
14. a) $\frac{22}{25}$ b) $\frac{7}{2}$ c) 1260