RS Aggarwal Solutions for Class 8 Maths Chapter 3 Exercise 3.5: The Physics Wallah academic team has provided a comprehensive answer for Chapter 3: Squares and Square Roots in the RS Aggarwal class 8 textbook. The RS Aggarwal class 8 solution for Chapter 3 Squares and Square Roots Exercise-3E is uploaded for reference only; do not copy the solutions.

Before going through the solution of chapter-3 Squares and Square Roots Exercise-3E, one must have a clear understanding of Chapter 3 Squares and Square Roots. Read the theory of Chapter 3 Squares and Square Roots and then try to solve all numerical of exercise-3E. For class 8 maths students, the NCERT textbook is a highly recommended resource for solving numerical problems and referencing NCERT solutions.

RS Aggarwal Solutions for Class 8 Maths Chapter 3 Exercise 3.5 Squares and Square Roots Overview

RS Aggarwal Solutions for Class 8 Maths Chapter 3 Exercise 3.5 "Squares and Square Roots." Exercise 3.5 specifically delves into solving problems related to these concepts. This exercise is designed to enhance students' understanding and computational skills in finding squares and square roots of numbers.

The exercise begins with straightforward problems requiring students to find the squares of given numbers, emphasizing the fundamental concept of squaring. It then progresses to more complex problems involving square roots, where students practice methods such as prime factorization and the long division method to determine the square roots of both perfect and non-perfect squares.

Additionally, the exercise includes problems that challenge students to apply their knowledge in practical scenarios, such as finding the side length of a square when given the area or solving word problems that require the use of square roots.

RS Aggarwal Solutions for Class 8 Maths Chapter 3 Exercise 3.5 (Ex 3E)

Below we have provided RS Aggarwal Solutions for Class 8 Maths Chapter 3 Exercise 3.5 Squares and Square Roots –

Evaluate:

Question (1) $\sqrt{576}$

Solution:

```
         | 24
       2 | 5 76
         | 4
     44  | 176
         | 176
         | ×
```

$\sqrt{576}$ = 24 Ans.

Question (2) √1444

Solution:

```
         | 38
       3 | 14 44
         | 9
     68  | 544
         | 544
         | ×
```

$\sqrt{1444}$ = 38 Ans.

Question (3) √4489

Solution:

```
          | 67
       6  | 44 89
          | 36
    127   | 889
          | 889
          | ×
```

$\sqrt{4489}$ = 67 Ans.

Question (4) √6241

Solution:

```
        79
   7 | 62 41
        49
 149 | 1341
       1341
        ×
```

$\sqrt{6241}$ = 79 Ans.

Question (5) √7056

Solution:

```
        84
   8 | 70 56
        64
 164 | 656
       656
        ×
```

$\sqrt{7056}$ = 84 Ans.

Question (6) √9025

Solution:

```
        95
   9 | 90 25
        81
 185 | 925
       925
        ×
```

$\sqrt{9025}$ = 95 Ans.

Question (7) √11449

Solution:

```
      | 107
  1   | 1 14 49
      | 1
  207 | 1449
      | 1449
      |   ×
```

$\sqrt{11449} = 107$ Ans.

Question (8) √14161

Solution:

```
      | 119
  1   | 1 41 61
      | 1
  21  | 41
      | 21
  229 | 2061
      | 2061
      |   ×
```

$\sqrt{14161} = 119$ Ans.

Question (9) √10404

Solution:

```
      | 102
  1   | 1 04 04
      | 1
  202 | 0404
      | 404
      |   ×
```

$\sqrt{10404} = 102$ Ans.

Question (10) √17956

Solution:

```
       | 134
  1    | 1 79 56
       | 1
  23   | 79
  ·    | 69
 264   | 1056
       | 1056
       | ×
```

$\sqrt{17956} = 134$ Ans.

Question (11) $\sqrt{19600}$

Solution:

```
       | 140
  1    | 1 96 00
       | 1
  24   | 96
       | 96
 280   | 00
       | 00
       | ×
```

$\sqrt{19600} = 140$ Ans.

Question (12) $\sqrt{92416}$

Solution:

```
       | 304
  3    | 9 24 16
       | 9
 604   | 2416
       | 2416
       | ×
```

$\sqrt{92416} = 304$ Ans.

Question (13) Find the least number which must be subtracted from 2509 to make it a perfect square.

Let us try to find the square root of 2509.

```
         50
   5 | 25 09
     | 25
 100 |    09
     |    00
     |    09
```

9 must be subtracted to get the perfect square 100.
Least number to be subtracted = 9

Question (14) Find the least number which must be subtracted from 7581 to obtain a perfect square. Find this perfect square ant its square root.

Let us try to find the square root of 7581.

Solution:
Finding the square root of 7581 by division method, we find that 12 is left as remainder.
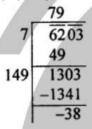12 must be subtracted from 7581 to get a perfect square i.e., 7581 – 12 = 7569

```
         87
   8 | 75 81
     | 64
 167 | 1181
     | 1169
     |   12
```

(i) The least number to be subtracted = 12
(ii) Perfect square = 7569
(iii) and square root = 87 Ans.

Question (15) Find the least number which must be added to 6203 to obtain a perfect square. Find this perfect square and its square root.

Solution:

Finding the square root of 6203 by division method, we find that 38 is to be added to get a perfect square.

(i) Least number to be added = 38
(ii) Perfect square = 6241
(iii) Square root = 79 Ans.

```
           79
       ┌─────────
    7  │ 62 03
       │ 49
  149  │ 1303
       │ -1341
       │   -38
```

Question (16) Find the least number which must be added to 8400 to obtain a perfect square. Find this perfect square and its square root.

Solution:

Finding the square root of 8400 by long division method, we find that 64 is to be added to 8400,
We, get 8400 + 64 = 8464

```
           92
       ┌─────────
    9  │ 84 00
       │ 81
  182  │ 300
       │ -364
       │   64
```

Least number to be added = 64
Perfect square = 8464
Square root = 92 Ans.

Question (17) Find the least number of four digits which is a perfect square. Also find the square root of the number so obtained.

Solution:

Least four digit number = 1000

```
        32
    3 | 1000
        9
   62 | 100
      | −124
      | −24
```
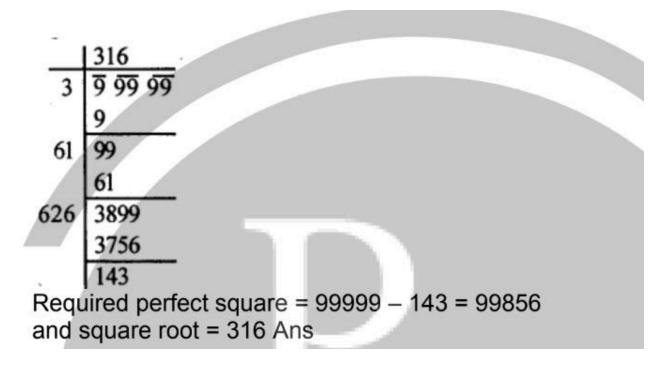
Finding the square root of 1000 by division method, we find that 24 must be added to get a perfect square of 4 digits.

Perfect square = 1000 + 24 = 1024 Ans.

square root of 1024 = 32

```
        32
    3 | 1024
        9
   62 | 124
      | −124
      |  ×
```

Question (18) Find the greatest number of five digits which is perfect square. Also find the square root of the number so obtained.

Solution:

Greatest number of five digits = 99999

Finding the square root of 99999

We get remainder = 143

```
        | 316
   _____|_____
   3    | 9 99 99
        | 9
        |_____
   61   | 99
        | 61
        |_____
   626  | 3899
        | 3756
        |_____
        | 143
```

Required perfect square = 99999 − 143 = 99856
and square root = 316 Ans

Question (19) The area of a square field is 60025 m². A man cycles along its boundary at 18 km/h. In how much time will he return to the starting point?

Solution:
Area of a square field = 60025 m²

Let its side = a

$$\therefore a^2 = 60025 \Rightarrow a = \sqrt{60025}$$
$$\Rightarrow a = 245 \; m$$

```
          245
     2 | 60025
       |  4
    44 |  200
       |  176
   485 |  2425
       |  2425
       |    ×
```

Perimeter = $4a = 4 \times 245 = 980 \; m$

Speed of cycling = 18 km/h

$\therefore$ Time taken to complete its

boundary $= \dfrac{980}{1000} \times \dfrac{60}{18} = \dfrac{49}{15}$ minutes

$= 3\dfrac{4}{15}$ minutes.

$= 3$ minutes 16 seconds Ans.

Benefits of RS Aggarwal Solutions for Class 8 Maths Chapter 3 Exercise 3.5

The RS Aggarwal Solutions for Class 8 Maths Chapter 3 Exercise 3.5 on Squares and Square Roots offers several benefits to students:

Comprehensive Understanding: The solutions provide detailed explanations for each problem, helping students understand the underlying concepts of squares and square roots thoroughly.

Step-by-Step Guidance: Each solution is broken down into manageable steps, making it easier for students to follow and learn the correct procedures for solving similar problems.

Enhanced Problem-Solving Skills: By working through a variety of problems, students can develop and improve their problem-solving skills, which are crucial for higher-level mathematics.

Clarity in Concepts: The solutions clarify complex concepts by providing clear and concise explanations, ensuring that students can grasp the material effectively.

Confidence Building: Regular practice with these solutions helps students build confidence in their abilities to tackle square and square root problems independently.

Exam Preparation: The solutions are aligned with the curriculum and exam patterns, providing students with relevant practice that prepares them for school exams and standardized tests.