



MATHS

BOOKS - PSEB

SQUARES AND SQUARE ROOTS

Exercise

1. What will be the unit digit of the squares of the following numbers : 81



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2. What will be the unit digit of the squares of the following numbers : 272



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3. What will be the unit digit of the squares of the following numbers : 799



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4. What will be the unit digit of the squares of the following numbers : 3853



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5. What will be the unit digit of the squares of the following numbers : 1234



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6. What will be the unit digit of the squares of the following numbers : 26387



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7. What will be the unit digit of the squares of the following numbers : 52698



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8. What will be the unit digit of the squares of the following numbers : 99880



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9. What will be the unit digit of the squares of the following numbers : 12796



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10. What will be the unit digit of the squares of the following numbers : 55555



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11. The following numbers are obviously not perfect squares. Give reason : 1057



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12. The following numbers are obviously not perfect squares. Give reason : 23453



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13. The following numbers are obviously not perfect squares. Give reason : 7928



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14. The following numbers are obviously not perfect squares. Give reason : 222222



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15. The following numbers are obviously not perfect squares. Give reason : 64000



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16. The following numbers are obviously not perfect squares. Give reason : 89722



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17. The following numbers are obviously not perfect squares. Give reason : 222000



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18. The following numbers are obviously not perfect squares. Give reason : 505050



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19. The squares of which of the following would be odd numbers : 431



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20. The squares of which of the following would be odd numbers : 2826



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21. The squares of which of the following would be odd numbers : 7779



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22. The squares of which of the following would be odd numbers : 82004



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23. If the increasing in speed causes a corresponding decrease in the time of the product. identify the relation.



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24. If the cost of the 20 pens is Rs.180, calculate the cost of 15 pens



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25. Without adding, find the sum: $1 + 3 + 5 + 7$
 $+ 9$



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26. Without adding, find the sum: $1 + 3 + 5 + 7$
 $+ 9 + 11 + 13 + 15 + 17 + 19$



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27. Without adding, find the sum: $1 + 3 + 5 + 7$
 $+ 9 + 11 + 13 + 15 + 17 + 19 + 21 + 23$



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28. Express 49 as the sum of 7 odd numbers.



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29. Express 121 as the sum of 11 odd numbers.



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30. How many numbers lie between squares of the following numbers: 12 and 13



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31. How many numbers lie between squares of the following numbers: 25 and 26



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32. How many numbers lie between squares of the following numbers: 99 and 100



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33. Find the square of the following numbers :

32



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34. Find the square of the following numbers :

35



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35. Find the square of the following numbers :

86



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36. Find the square of the following numbers :

93



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37. Find the square of the following numbers :

71



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38. Find the square of the following numbers :

46



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39. Write a Pythagorean triplet whose one member is : 6



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40. Write a Pythagorean triplet whose one member is : 14



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41. Write a Pythagorean triplet whose one member is : 16



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42. Write a Pythagorean triplet whose one member is : 18



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43. What could be the possible 'one's' digits of the square root of each of the following numbers: 9801



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44. What could be the possible 'one's' digits of the square root of each of the following numbers: 99856



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45. What could be the possible 'one's' digits of the square root of each of the following numbers: 998001



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46. What could be the possible 'one's' digits of the square root of each of the following numbers: 657666025



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47. Without doing any calculation, find the numbers which are surely not perfect squares:

153



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48. Without doing any calculation, find the numbers which are surely not perfect squares:

257



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49. Without doing any calculation, find the numbers which are surely not perfect squares:

408



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50. Without doing any calculation, find the numbers which are surely not perfect squares:

441



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51. Find the square roots of 100 and 169 by the method of repeated subtraction.



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52. Find the square roots of the following numbers by the Prime Factorisation Method:

729



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53. Find the square roots of the following numbers by the Prime Factorisation Method:

400



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54. Find the square roots of the following numbers by the Prime Factorisation Method:

1764



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55. Find the square roots of the following numbers by the Prime Factorisation Method:

4096



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56. Find the square roots of the following numbers by the Prime Factorisation Method:

7744



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57. Find the square roots of the following numbers by the Prime Factorisation Method:

9604



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58. Find the square roots of the following numbers by the Prime Factorisation Method:

5929



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59. Find the square roots of the following numbers by the Prime Factorisation Method:

9216



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60. Find the square roots of the following numbers by the Prime Factorisation Method:

529



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61. Find the square roots of the following numbers by the Prime Factorisation Method: 8100



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62. For each of the following numbers, find the smallest whole number by which it should be multiplied so as to get a perfect square number. Also find the square root of the square number so obtained: 252



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63. For each of the following numbers, find the smallest whole number by which it should be multiplied so as to get a perfect square number. Also find the square root of the square number so obtained: 180



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64. For each of the following numbers, find the smallest whole number by which it should be

multiplied so as to get a perfect square number. Also find the square root of the square number so obtained: 1008



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65. For each of the following numbers, find the smallest whole number by which it should be multiplied so as to get a perfect square number. Also find the square root of the square number so obtained: 2028



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66. For each of the following numbers, find the smallest whole number by which it should be multiplied so as to get a perfect square number. Also find the square root of the square number so obtained: 1458



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67. For each of the following numbers, find the smallest whole number by which it should be multiplied so as to get a perfect square

number. Also find the square root of the square number so obtained: 768



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68. For each of the following numbers, find the smallest whole number by which it should be divided so as to get a perfect square. Also find the square root of the square number so obtained: 252



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69. For each of the following numbers, find the smallest whole number by which it should be divided so as to get a perfect square. Also find the square root of the square number so obtained: 2925



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70. For each of the following numbers, find the smallest whole number by which it should be divided so as to get a perfect square. Also find

the square root of the square number so
obtained: 396



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71. For each of the following numbers, find the smallest whole number by which it should be divided so as to get a perfect square. Also find the square root of the square number so obtained: 2645



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72. For each of the following numbers, find the smallest whole number by which it should be divided so as to get a perfect square. Also find the square root of the square number so obtained: 2800



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73. For each of the following numbers, find the smallest whole number by which it should be divided so as to get a perfect square. Also find

the square root of the square number so obtained: 1620



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74. The students of Class VIII of a school donated Rs 2401 in all, for Prime Minister's National Relief Fund. Each student donated as many rupees as the number of students in the class. Find the number of students in the class.



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75. 2025 plants are to be planted in a garden in such a way that each row contains as many plants as the number of rows. Find the number of rows and the number of plants in each row.



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76. Find the smallest square number that is divisible by each of the numbers 4, 9 and 10.



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77. Find the smallest square number that is divisible by each of the numbers 8, 15 and 20.



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78. Find the square root of : 729



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79. Find the square root of : 1296



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80. Find the least number that must be subtracted from 5607 so as to get a perfect square. Also find the square root of the perfect square.



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81. Find the greatest 4-digit number which is a perfect square.



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82. Find the least number that must be added to 1300 so as to get a perfect square. Also find the square root of the perfect square.



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83. Find the square root of 12.25.



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84. Area of a square plot is $2304m^2$. Find the side of the square plot.



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85. There are 2401 students in a school. P.T. teacher wants them to stand in rows and columns such that the number of rows is equal to the number of columns. Find the number of rows.



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Example

1. Find the square of the following numbers without actual multiplication: 39



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2. Find the square of the following numbers without actual multiplication 42



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3. Write a Pythagorean triplet whose smallest member is 8.



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4. Find a Pythagorean triplet in which one member is 12.



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5. Find the square root of 6400.



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6. Is 90 a perfect square?



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7. Is 2352 a perfect square? If not, find the smallest multiple of 2352 which is a perfect square. Find the square root of the new number.



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8. Find the smallest number by which 9408 must be divided so that the quotient is a perfect square. Find the square root of the quotient.



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9. Find the smallest square number which is divisible by each of the numbers 6, 9 and 15.



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10. Find the square root of each of the following numbers by Division method: 2304



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11. Find the square root of each of the following numbers by Division method: 4489



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12. Find the square root of each of the following numbers by Division method: 3481



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13. Find the square root of each of the following numbers by Division method: 529



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14. Find the square root of each of the following numbers by Division method: 3249



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15. Find the square root of each of the following numbers by Division method: 1369



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16. Find the square root of each of the following numbers by Division method: 5776



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17. Find the square root of each of the following numbers by Division method: 7921



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18. Find the square root of each of the following numbers by Division method: 576



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19. Find the square root of each of the following numbers by Division method: 1024



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20. Find the square root of each of the following numbers by Division method: 3136



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21. Find the square root of each of the following numbers by Division method: 900



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22. Find the number of digits in the square root of each of the following numbers (without any calculation): 64



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23. Find the number of digits in the square root of each of the following numbers (without any calculation): 144



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24. Find the number of digits in the square root of each of the following numbers (without any calculation): 4489



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25. Find the number of digits in the square root of each of the following numbers (without any calculation): 27225



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26. Find the number of digits in the square root of each of the following numbers (without any calculation): 390625



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27. Find the square root of the following decimal numbers: 2.56



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28. Find the square root of the following decimal numbers: 7.29



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29. Find the square root of the following decimal numbers: 51.84



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30. Find the square root of the following decimal numbers: 42.25



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31. Find the square root of the following decimal numbers: 31.36



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32. Find the least number which must be subtracted from each of the following numbers so as to get a perfect square. Also find the square root of the perfect square so obtained: 402



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33. Find the least number which must be subtracted from each of the following numbers so as to get a perfect square. Also

find the square root of the perfect square so
obtained: 1989



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34. Find the least number which must be subtracted from each of the following numbers so as to get a perfect square. Also find the square root of the perfect square so obtained: 3250



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35. Find the least number which must be subtracted from each of the following numbers so as to get a perfect square. Also find the square root of the perfect square so obtained: 825



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36. Find the least number which must be subtracted from each of the following numbers so as to get a perfect square. Also

find the square root of the perfect square so obtained: 4000



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37. Find the least number which must be added to each of the following numbers so as to get a perfect square. Also find the square root of the perfect square so obtained : 525



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38. Find the least number which must be added to each of the following numbers so as to get a perfect square. Also find the square root of the perfect square so obtained : 1750



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39. Find the least number which must be added to each of the following numbers so as to get a perfect square. Also find the square root of the perfect square so obtained : 252





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40. Find the least number which must be added to each of the following numbers so as to get a perfect square. Also find the square root of the perfect square so obtained : 1825



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41. Find the least number which must be added to each of the following numbers so as

to get a perfect square. Also find the square root of the perfect square so obtained : 6412



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42. Find the length of the side of a square whose area is $441m^2$.



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43. In a right triangle ABC , $\angle B = 90^\circ$: If $AB = 6$ cm, $BC = 8$ cm, find AC



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44. In a right triangle ABC , $\angle B = 90^\circ$: If $AC = 13$ cm, $BC = 5$ cm, find AB



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45. 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

same. Find the minimum number of plants he needs more for this.



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46. 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 number of columns. How many children would be left out in this arrangement.



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