

Ravi Maths Tuition Centre

Square And Square Roots

8th Standard
Mathematics

84 x 1 = 84

1) Which of the following is a perfect square?

(a) 122 (b) 289 (c) 258 (d) 260

2) 169 is the square of

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

3) Which of the following is a square of even number?

(a) 441 (b) 169 (c) 289 (d) 144

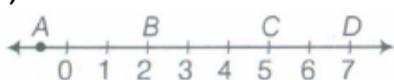
4) A number ending in 9 will have the unit's place of its square as

(a) 1 (b) 3 (c) 9 (d) 6

5) A square board has an area of 121 square units. How long is each side of the board?

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

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



(a) A (b) B (c) C (d) D

7) If one member of a Pythagorean triplet is $2m$, then other two members are

(a) $m, m^2 + 1$ (b) $m^2 + 1, m^2 - 1$ (c) $m^2, m^2 - 1$ (d) $m^2, m+1$

8) Which of the following cannot be a perfect square?

(a) 441 (b) 198 (c) 676 (d) All of these

9) The hypotenuse of a right angled triangle with its base and perpendicular of lengths $3x$, $4x$ respectively is

(a) $25x$ (b) $7x$ (c) $5x$ (d) $16x$

10) If $\sqrt{4096} = 64$, then the value of $\sqrt{4096} + \sqrt{40.96}$ is

(a) 70.4 (b) 64.4 (c) 60.4 (d) 68.4

11) A perfect square number having m digits, where m is even will have square root with

(a) $\frac{m}{2}$ digits (b) $\frac{m+1}{2}$ digits (c) $m + 1$ digits (d) $\frac{m}{3}$ digits

12) Which of the following can be a perfect square?

(a) A number ending in 3 or 7 (b) A number ending with odd number of zeros
(c) A number ending with even number of zeros (d) A number ending in 2.

13) Which of the following can be the square of a natural number 'n'?

(a) sum of the squares of first n natural numbers
(b) sum of the first n natural numbers (c) sum of first $(n - 1)$ natural numbers
(d) sum of first ' n ' odd natural numbers.

14) Which of the following is the number of non-perfect square numbers between the squares of the numbers n and $n + 1$?

(a) $n + 1$ (b) n (c) $2n$ (d) $2n+1$

15) Which of the following is the difference between the squares of two consecutive natural numbers is?

(a) sum of the two numbers (b) difference of the numbers
(c) twice the sum of the two numbers
(d) twice the difference between the two numbers.

16) Which of the following is the number of non-perfect square number between 17^2 and 18^2 ?

(a) 613 (b) 35 (c) 34 (d) 70

17) Which of the following is the difference between the squares of 21 and 22?

(a) 21 (b) 22 (c) 42 (d) 43

18) Which of the following is the number of zeros in the square of 900?

(a) 3 (b) 4 (c) 5 (d) 2

19) If a number of n-digits is a perfect square and 'n' is an even, then which of the following is the number of digits of its square root?

(a) $\frac{n-1}{2}$ (b) $\frac{n}{2}$ (c) $\frac{n+1}{2}$ (d) $2n$

20) If a number of n-digits is perfect square and 'n' is an odd, then which of the following is the number of digits of its square root?

(a) $\frac{n-1}{2}$ (b) $\frac{n}{2}$ (c) $\frac{n+1}{2}$ (d) $2n$

21) Which of the following is a Pythagorean triplet?

(a) $n, (n^2 - 1)$ and $(n^2 + 1)$ (b) $(n - 1), (n^2 - 1)$ and $(n^2 + 1)$
(c) $(n + 1), (n^2 - 1)$ and $(n^2 + 1)$ (d) $2n, (n^2 - 1)$ and $(n^2 + 1)$

22) Which of the following are the next-two triangular numbers: 1, 3, 6, 10, _____ and _____

(a) 13 and 17 (b) 14 and 21 (c) 15 and 21 (d) 16 and 25

23) Which of the following are the next-two square-numbers: 1, 4, 9, 16, _____ and _____

(a) 13 and 25 (b) 5 and 15 (c) 24 and 32 (d) 25 and 36

24) Which of the following is not true?

(a) Square of odd numbers are always odd numbers.
(b) Square of even numbers are always even numbers.
(c) A square number is always an even number.
(d) The smallest number of a Pythagorean triplet is 3. Its other two numbers are 4 and 5.

25) The greatest two digit-square number is

(a) 99 (b) 90 (c) 81 (d) 72

26) The perfect square number out of 2, 3, 4 and 5 is

(a) 2 (b) 3 (c) 4 (d) 5

27) A perfect square number between 30 and 40 is

(a) 36 (b) 32 (c) 33 (d) 39

28) Between 50 and 60, the perfect square number is

(a) 56 (b) 55 (c) 54 (d) none.

29) Which of the following is a perfect square number?

(a) 1067 (b) 7828 (c) 4333 (d) 625.

30) Which of the following is a perfect square number?

(a) 2222 (b) 32543 (c) 888 (d) 10000

31) Which of 132^2 , 87^2 , 72^2 and 209^2 would end with digit 1?

(a) 132^2 (b) 87^2 (c) 72^2 (d) 209^2

32) Which of 105^2 , 216^2 , 333^2 and 111^2 would end with digit 1?

(a) 105^2 (b) 216^2 (c) 333^2 (d) 111^2

33) Which of 21^2 , 33^2 , 47^2 and 36^2 would have 6 at unit place?

(a) 21^2 (b) 33^2 (c) 47^2 (d) 36^2

34) What will be the number of zeros in the square of the number 100?

(a) 2 (b) 4 (c) 6 (d) 8

35) What will be the number of zeros in the square of the number 50?

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

36) What will be the number of zeros in the square of the number 9000?

(a) 2 (b) 3 (c) 4 (d) 6

37) The square of which of the following numbers will be even?

11, 111, 1111, 112

(a) 11 (b) 111 (c) 1111 (d) 112

38) The square of which of the following numbers will be odd?

10, 100, 1000, 99

(a) 10 (b) 100 (c) 1000 (d) 99

39) The square of which of the following numbers will be even?

21, 27, 35, 50

(a) 21 (b) 27 (c) 35 (d) 50

40) The square of which of the following in the square of the numbers will be odd?

(a) 42 (b) 54 (c) 66 (d) 81

41) How many natural numbers lie between 8^2 and 9^2 ?

(a) 16 (b) 17 (c) 18 (d) 19

42) How many natural numbers lie between 12^2 and 13^2 ?

(a) 20 (b) 22 (c) 24 (d) 26

43) How many nonsquare numbers lie between the pair of numbers 80^2 and 81^2 ?

(a) 162 (b) 160 (c) 161 (d) 164

44) How many nonsquare numbers lie between the pair of numbers 36^2 and 37^2 ?

(a) 36 (b) 37 (c) 74 (d) 72

45) How many nonsquare numbers lie between the pair of numbers 500^2 and 501^2 ?

(a) 1000 (b) 999 (c) 1001 (d) 1002

46) Express the square number 5^2 as the sum of two consecutive integers.

(a) $12 + 13$ (b) $10 + 15$ (c) $9 + 16$ (d) $20 + 5$

47) Express 9^2 as the sum of two consecutive integers.

(a) $40 + 41$ (b) $50 + 31$ (c) $36 + 45$ (d) $72 + 9$

48) Express 7^2 as the sum of two consecutive integers

(a) $40 + 9$ (b) $24 + 25$ (c) $36 + 13$ (d) $32 + 17$

49) The unit digit in the square of the number 132 is

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

50) The unit digit in the square of the number 1000 is

(a) 1 (b) 0 (c) 2 (d) none of these

51) The unit digit in the square of the number 1111 is

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

52) The unit digit in the square of the number 1333 is

(a) 3 (b) 6 (c) 9 (d) 1

53) The unit digit in the square of the number 2644 is

- (a) 4 (b) 6 (c) 8 (d) 2

54) The unit digit in the square of the number 125 is

- (a) 1 (b) 2 (c) 5 (d) 6

55) The unit digit in the square of the number 166 is

- (a) 2 (b) 4 (c) 6 (d) 8

56) The unit digit in the square of the number 27 is

- (a) 7 (b) 2 (c) 5 (d) 9

57) The unit digit in the square of the number 78 is

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

58) The unit digit in the square of the number 209 is

- (a) 1 (b) 2 (c) 0 (d) 9

59) Which of the following is not a Pythagorean triplet?

- (a) 3, 4, 5 (b) 6, 8, 10 (c) 5, 12, 13 (d) 2, 3, 4.

60) If $10^2 = 100$, then the square root of 100 is

- (a) 1 (b) 10 (c) 100 (d) 1000

61) If $25^2 = 625$, then the square root of 625 is

- (a) 5 (b) 25 (c) 125 (d) 625

62) What could be the possible one's digit of the square root of 625?

- (a) 2 (b) 3 (c) 4 (d) 5

63) What could be the possible one's digit of the square root of 121?

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

64) What could be the possible one's digit of the square root of 361?

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

65) What could be the possible one's digit of the square root of 576?

- (a) 4, 6 (b) 5, 7 (c) 1, 8 (d) 2, 9

66) What could be the possible one's digit of the square root of 676?

- (a) 4, 6 (b) 5, 7 (c) 1, 8 (d) 2, 9

67) The smallest number by which 32 should be multiplied so as to get a perfect square is

- (a) 2 (b) 3 (c) 4 (d) 8

68) The smallest number by which 48 should be multiplied so as to get a perfect square is

- (a) 2 (b) 3 (c) 4 (d) 5

69) The smallest number by which 45 should be multiplied so as to get a perfect square is

- (a) 2 (b) 3 (c) 5 (d) 7

70) The smallest number by which 54 should be multiplied so as to get a perfect square is

- (a) 2 (b) 3 (c) 4 (d) 6

71) The smallest number by which 28 should be multiplied so as to get a perfect square is

- (a) 2 (b) 4 (c) 3 (d) 7

72) The smallest number by which 1000 should be multiplied so as to get a perfect square is

- (a) 5 (b) 10 (c) 4 (d) 8

73) The smallest number by which 128 should be divided so as to get a perfect square is

- (a) 2 (b) 3 (c) 4 (d) 8

74) The smallest number by which 48 should be divided so as to get a perfect square is
 (a) 2 (b) 3 (c) 4 (d) 6

75) The smallest number by which 125 should be divided so as to get a perfect square is
 (a) 3 (b) 5 (c) 25 (d) 125

76) The smallest number by which 150 should be divided so as to get a perfect square is
 (a) 4 (b) 2 (c) 5 (d) 6

77) The smallest number by which 112 should be divided so as to get a perfect square is
 (a) 6 (b) 4 (c) 3 (d) 7

78) The smallest number by which 1000 should be divided so as to get a perfect square is
 (a) 5 (b) 10 (c) 100 (d) 1000

79) The smallest 3-digit perfect square is
 (a) 999 (b) 100 (c) 961 (d) 125

80) The number of digits in the square root of 62500 is
 (a) 1 (b) 2 (c) 3 (d) 4

81) The number of digits in the square root of 441 is
 (a) 1 (b) 2 (c) 3 (d) 4

82) The number of digits in the square root of 100 is
 (a) 1 (b) 2 (c) 3 (d) 4

83) Find the length of the side of a square whose area is 100 cm^2 .
 (a) 5 cm (b) 10 cm (c) 100 cm (d) 4 cm

84) The students of class VIII of a school donated Rs.10000 in all, for Prime Minister's National Relief Fund. Each student donated as many rupees as the number of students in the class. The number of students in the class is
 (a) 10 (b) 100 (c) 1000 (d) 10000

$$18 \times 1 = 18$$

85) There are _____ perfect square between 1 and 100.

86) The unit's digit in the square of 1456 is _____

87) The square root of 24025 will have _____ digits.

88) $1\text{m}^2 = \text{_____ cm}^2$

89) $\sqrt{2.89} = \text{_____}$

90) The square of 0.9 is _____

91) The digit at the one's place of 59^2 is _____

92) The least number by which 125 be multiplied to make it a perfect square is

93) $1 + 3 + 5 + 7 + 9 + \text{_____} = 5^2$

94) $1 + 3 + 5 + 7 + 9 + \text{_____} = 6^2$

95) $11^2 = \text{_____} + \text{_____}$

96) $(\text{____})^2 = 112 + 113$

97) $1^2 = 1$, then square root of 1 = _____.

98) $2^2 = 4$, then square root of $2^2 = \text{_____}$

99) $5^2 = 25$, then square root of 25 = _____.

100) $8^2 = 64$, then square root of _____ = 8.

101) $10^2 = 100$, then square root of _____ = 10.

102) Which of 17^2 , 34^2 , 25^2 and 49^2 would have 6 at unit place?

$$8 \times 1 = 8$$

103) The square of 87 will have 3 at the unit's place.

(a) True (b) False

104) The sum of two perfect squares is a perfect square.

(a) True (b) False

105) The product of two perfect squares is a perfect square.

(a) False (b) True

106) There is one square number between 160 and 170.

(a) False (b) True

107) 1000 is a perfect square.

(a) True (b) False

108) The square of 2.3 is 5.29.

(a) False (b) True

109) All numbers of a Pythagorean triplet are odd.

(a) True (b) False

110) For every natural number $m > 1$, $2m$, $m^2 - 1$, $m^2 + 1$ form a Pythagorean triplet.

(a) False (b) True

$8 \times 1 = 8$

111) 4.41

(1) $\frac{n+1}{2}$

112) 2.89

(2) 2.1

113) 0.81

(3) 0.9

114) 1.96

(4) $2n$, (n^2-1) and (n^2+1)

115) There are '2n' non-perfect square numbers between the square of the numbers

(5) $\frac{n}{2}$

116) For any natural number greater than 1, are called a Pythagorean Triplet

(6) n and $n + 1$

117) If n is an even number of digits of a square number then the number of digits in its square root are

(7) 1.7

118) If n is an odd number of digits of a square-number then the number of digits in its square-root are

(8) 1.4

$48 \times 1 = 48$

119) Find the square root of 6400.

120) 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.

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

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

123) 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.

124) Area of a square plot is 2304m^2 . Find the side of the square.

125) There are 2401 students in a school. P.T. teacher wants to stand them in such a manner that number of rows and columns are the same. Find the number of rows.

126) Can you find the square of the following number 6666667^2

127) Can you find the square of the following number 66666667^2

128) Can a number ending 1 or 9 be always a square number?

129) Which of the following is a perfect square?

1000, 296, 361, 524

130) if we add two consecutive triangular numbers, do we get a square number?

131) Can a number ending in two zeros, be always perfect square number?

132) Write all the square numbers between 100 and 300.

133) Which of the following would end with digit 9:

1232, 772, 842, 1612, and 102.

134) Write all the non-square numbers between 4^2 and 5^2 .

135) Find the square of:

35

136) Find the square of:

105

137) Write the Pythagorean triplet whose smallest number is 8.

138) Find a Pythagorean triplet in which one member is 12.

139) What will be the number of zeroes in the square of:

50

140) What will be the number of zeroes in the square of:

300?

141) Express 19^2 as the sum of two consecutive integers.

142) How many numbers lie between squares of the following numbers?

26 and 27

143) How many numbers lie between squares of the following numbers?

30 and 31

144) Find the square of 29 using the formula $(a - b)^2 = a^2 + b^2 - 2ab$.

145) Find a Pythagorean triplet corresponding to $n = 5$.

146) Using perfect factors, find the square root of 1764.

147) Find the smallest whole number by which 2800 should be divided to get a perfect square. Also find the square root the number so obtained.

148) Find the smallest square number which is divisible by each of the numbers 10, 9 and 4.

149) Without calculating square roots, find the number of digits in the square root of the number 36481.

150) Using prime factorisation, find the square root of:

81

151) Using prime factorisation, find the square root of:

144

152) Using prime factorisation, find the square root of:

225

153) Using prime factorisation, find the square root of:

324

154) Using prime factorisation, find the square root of:

7056

155) Are the following numbers perfect squares?

90

156) Are the following numbers perfect squares?

900

157) 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.

158) Using the long division method find the square root of the following numbers.

529

159) Using the long division method find the square root of the following numbers.

4096

160) Using the long division method find the square root of the following numbers.

14400

161) Using the long division method find the square root of the following numbers.

729

162) Using the long division method find the square root of the following numbers.

1296

163) Find the square root of 39204.

164) Find the square root of:

17.64

165) Find the square root of:

12.25

166) Write the next two square numbers after 441 which end in 1 and their corresponding numbers.

$$213 \times 2 = 426$$

167) Find the perfect square numbers between 30 and 40

168) Find the perfect square numbers between 50 and 60

169) Can we say whether the following numbers are perfect squares? How do we know?

1057

Write five numbers which you can decide by looking at their units digit that they are not square numbers.

170) Can we say whether the following numbers are perfect squares? How do we know?

23453

Write five numbers which you can decide by looking at their units digit that they are not square numbers.

171) Can we say whether the following numbers are perfect squares? How do we know?

7928

Write five numbers which you can decide by looking at their units digit that they are not square numbers.

172) Can we say whether the following numbers are perfect squares? How do we know?

222222

Write five numbers which you can decide by looking at their units digit that they are not square numbers.

173) Can we say whether the following numbers are perfect squares? How do we know?

1069

Write five numbers which you can decide by looking at their units digit that they are not square numbers.

174) Can we say whether the following numbers are perfect squares? How do we know?

2061

Write five numbers which you can decide by looking at their units digit that they are not square numbers.

175) Write five numbers which you cannot decide just by looking at their unit's digit (or one's place) whether they are square numbers or not.

176) Which of $123^2, 77^2, 82^2, 161^2, 109^2$ would end with digit 1?

177) Which of the following numbers would have digit 6 at unit's place? 19^2

178) Which of the following numbers would have digit 6 at unit's place? 24^2

179) Which of the following numbers would have digit 6 at unit's place? 26^2

180) Which of the following numbers would have digit 6 at unit's place? 36^2

181) Which of the following numbers would have digit 6 at unit's place? 34^2

182) What will be the one's digit in the square of the following numbers? 1234

183) What will be the one's digit in the square of the following numbers? 26387

184) What will be the one's digit in the square of the following numbers? 52698

185) What will be the one's digit in the square of the following numbers? 99880

186) What will be the one's digit in the square of the following numbers? 21222

187) What will be the one's digit in the square of the following numbers? 9106

188) The square of which of the following numbers would be an odd number/an even number? Why? 727

189) The square of which of the following numbers would be an odd number/an even number? Why? 158

190) The square of which of the following numbers would be an odd number/an even number? Why? 269

191) The square of which of the following numbers would be an odd number/an even number? Why? 1980

192) What will be the number of zeros in the square of the following numbers? 60

193) How many natural numbers lie between 9^2 and 10^2 ?

194) How many non square numbers lie between the following pairs of numbers? 100^2 and 101^2

195) How many non square numbers lie between the following pairs of numbers? 90^2 and 91^2

196) How many non square numbers lie between the following pairs of numbers ? 1000^2 and 1001^2

197) Find whether each of the following numbers is a perfect square or not. 121

198) Find whether each of the following numbers is a perfect square or not. 55

199) Find whether each of the following numbers is a perfect square or not. 81

200) Find whether each of the following numbers is a perfect square or not. 49

201) Find whether each of the following numbers is a perfect square or not. 69

202) Do you think the reverse is also true, i.e. the sum of any two consecutive positive integers is perfect square of a number? Give example to support your answer.

203) Write the square, making use of the above pattern 111111^2

204) Write the square, making use of the above pattern 1111111^2

205) What will be the unit's digit of the squares of the following numbers? 81

206) What will be the unit's digit of the squares of the following numbers? 272

207) What will be the unit's digit of the squares of the following numbers? 799

208) What will be the unit's digit of the squares of the following numbers? 3853

209) The following numbers are obviously not perfect squares. Give reason. 1057

210) The following numbers are obviously not perfect squares. Give reason. 23453

211) The following numbers are obviously not perfect squares. Give reason. 7928

212) The following numbers are obviously not perfect squares. Give reason. 222222

213) The following numbers are obviously not perfect squares. Give reason. 64000

214) The following numbers are obviously not perfect squares. Give reason. 89722

215) The following numbers are obviously not perfect squares. Give reason. 222000

216) The following numbers are obviously not perfect squares. Give reason. 505050

217) Express 49 as the sum of 7 odd numbers.

218) Express 121 as the sum of 11 odd numbers

219) How many numbers lie between squares of the following numbers? 12 and 13

220) How many numbers lie between squares of the following numbers? 25 and 26

221) How many numbers lie between squares of the following numbers? 99 and 100

222) Find the squares of the following numbers containing 5 in unit's place. 15

223) Find the squares of the following numbers containing 5 in unit's place. 95

224) Find the squares of the following numbers containing 5 in unit's place. 105

225) Find the squares of the following numbers containing 5 in unit's place. 205

226) Find the square of the following numbers. 32

227) Find the square of the following numbers. 35

228) Find the square of the following numbers. 86

229) Find the square of the following numbers. 93

230) Find the square of the following numbers. 71

231) Find the square of the following numbers. 46

232) Write a Pythagorean triplet whose one member is 6

233) Write a Pythagorean triplet whose one member is 14

234) Write a Pythagorean triplet whose one member is 16

235) Write a Pythagorean triplet whose one member is 18

236) If $11^2 = 121$, what is the square root of 121?

237) If $14^2 = 196$, What is the square root of 196?

238) $(-1)^2 = 1$. Is - 1, a square root of 1?

239) $(-2)^2 = 4$. Is -2, a square root of 4?

240) $(-9)^2 = 81$. Is -9, a square root of 81?

241) What could be the possible one's digits of the square root of each of the following numbers? 9801

242) What could be the possible one's digits of the square root of each of the following numbers? 99856

243) What could be the possible one's digits of the square root of each of the following numbers? 998001

244) What could be the possible one's digits of the square root of each of the following numbers? 657666025

245) Without doing any calculation, find the numbers which are surely not perfect squares. 153

246) Without doing any calculation, find the numbers which are surely not perfect squares. 257

247) Without doing any calculation, find the numbers which are surely not perfect squares. 408

248) Without doing any calculation, find the numbers which are surely not perfect squares. 441

249) Find the square root of 12.25

250) Without calculating square root, find the number of digits in the square root of the following numbers. 25600

251) Without calculating square root, find the number of digits in the square root of the following numbers. 100000000

252) Without calculating square root, find the number of digits in the square root of the following numbers. 36864

253) Find the square root of each of the following numbers by division method. 2304

254) Find the square root of each of the following numbers by division method. 4489

255) Find the square root of each of the following numbers by division method. 3481

256) Find the square root of each of the following numbers by division method. 529

257) Find the square root of each of the following numbers by division method. 3249

258) Find the square root of each of the following numbers by division method. 1369

259) Find the square root of each of the following numbers by division method. 5776

260) Find the square root of each of the following numbers by division method. 7921

261) Find the square root of each of the following numbers by division method. 576

262) Find the square root of each of the following numbers by division method. 1024

263) Find the square root of each of the following numbers by division method. 3136

264) Find the square root of each of the following numbers by division method. 900

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

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

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

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

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

270) Find the square root of the following decimal numbers. 2.56

271) Find the square root of the following decimal numbers. 7.29

272) Find the square root of the following decimal numbers. 51.84

273) Find the square root of the following decimal numbers. 42.25

274) Find the square root of the following decimal numbers. 31.36

275) Express the following as the sum of two consecutive integers. 11^2

276) Express the following as the sum of two consecutive integers. 19^2

277) What will be the unit digit of the squares of the following numbers?
12796

278) What will be the unit digit of the squares of the following numbers?
55555

279) Find the square of the following numbers without actual multiplication
39

280) Find the square of the following numbers without actual multiplication.
42

281) Can a right angled triangle with sides 6 cm, 10 cm and 8 cm be formed? Give reason.

282) Find the square root of the following by long division method. 27.04

283) Find the square root of the following by long division method. 1.44

284) Find the number of plants in each row, if 1024 plants are arranged, so that number of plants in a row is the same as the number of rows.

285) A hall has a capacity of 2704 seats. If the number of rows is equal to the number of seats in each row, find the number of seats in each row.

286) A general wishes to draw his 7500 soldiers in the form of a square. After arranging, he found out that some of them are left out. How many soldiers were left out?

287) What is the least number that should be added to 6200 to make it a perfect square? Also, find square root of that number.

288) A decimal number is multiplied by itself. If the product is 51.84, then find the number.

289) Find the least number of four digits that is a perfect square.

290) Find the greatest number of three digits that is a perfect square.

291) Find the square root of 6280036.

292) What will be the number of zeros in the square of the following numbers? 400

293) How many natural numbers lie between 11^2 and 12^2 ?

294) The squares of which of the following would be odd numbers? 431

295) The squares of which of the following would be odd numbers? 2826

296) The squares of which of the following would be odd numbers? 7779

297) The squares of which of the following would be odd numbers? 82004

298) Which of the following numbers would have digit 9 at unit's place? $119^2, 229^2, 23^2, 24^2, 26^2$

299) How many natural numbers lie between 10^2 and 11^2 ?

300) Without adding, find the sum of $1 + 3 + 5 + 7 + 9 + 11 + 13$.

301) Express 64 as the sum of 8 odd numbers

302) Using the given pattern, find the value of x. $7^2 + 8^2 + 56^2 = 57^2, 10^2 + 11^2 + 110^2 = x^2$

303) How many numbers lie between square of the 85 and 86?

304) Find the unit's digit of the square of following numbers. 29

305) Find the unit's digit of the square of following numbers. 132

306) Find the unit's digit of the square of following numbers. 64293

307) Find the unit's digit of the square of following numbers. 236601

308) Find the unit's digit of the square of following numbers. 929209

309) Find the unit's digit of the square of following numbers. 20121208

310) Which of the following are not perfect squares? 33333

311) Which of the following are not perfect squares? 26623

312) Which of the following are not perfect squares? 1026000

313) Which of the following are not perfect squares? 152399025

314) Observe the pattern. find the value of $x \cdot (22)^2 = 484$, $(202)^2 = 40804$, and $(X)^2 = 400080004$

315) Find the square of the following numbers. 21

316) Find the square of the following numbers. 28

317) Find the square of the following numbers. 41

318) Find the square of the following numbers. 38

319) Find the value $[(438)^2 - (437)^2]$.

320) Evaluate the following without actual multiplication. $(709)^2$

321) Evaluate the following without actual multiplication. $(615)^2$

322) Evaluate the following by splitting the numbers $(294)^2$

323) Evaluate the following by splitting the numbers $(396)^2$

324) Find the Pythagorean triplet, whose smallest member is 24.

325) Find the Pythagorean triplet. whose largest member is 65.

326) Find the Pythagorean triplet, whose middle member is 80.

327) Find the product of two consecutive odd numbers. 31×33

328) Find the product of two consecutive odd numbers. 33×35

329) Find the product of two consecutive even numbers 42×44

330) Find the product of two consecutive even numbers 46×48

331) Find the product of two consecutive even numbers 56×58

332) Find the value of $[(211)^2 - (210)^2] + 49 \times 51$.

333) Find the square root of 2116

334) Find the square root of 841

335) Find the square root of 121 and 144 by the repeated subtraction method.

336) Find the square root of the following numbers by prime factorisation method. 676

337) Find the square root of the following numbers by prime factorisation method. 484

338) Find the square root of the following numbers by prime factorisation method. 2304

339) Find the square root of the following numbers by prime factorisation method. 2809

340) What is the least number to be multiplied with 294 to make it a perfect square. Also, find the square root of the perfect square number so obtained.

341) Find the value of $\sqrt{\frac{324}{81}} + \sqrt{\frac{324}{81}}$

342) Find the square root of $105 \frac{4}{64}$

343) If $\sqrt{\frac{x}{169}} = \frac{18}{13}$, then find the value of x.

344) If $\sqrt{18 \times 14 \times x} = 168$, then find the value of x.

345) Find the square root, by division method. 57600

346) Find the square root, by division method. 12.96

347) Find the square root, by division method. 3136

348) What is the least number to be added to 8200 to make it a perfect square (using division method)?

349) Find the difference in 777 and its nearest perfect square number.

350) Evaluate $\sqrt{0.90}$ up to three places of decimal.

351) Find the value of $\sqrt{400} + \sqrt{0.04} - \sqrt{0.0000004}$

352) Evaluate. $\sqrt{\frac{0.0289}{0.0121}} + \sqrt{\frac{64}{16}}$

353) Evaluate $\sqrt{10} + \frac{\sqrt{9.5 \times 0.0085 \times 18.9}}{0.021 \times 0.0017 \times 1.9}$

354) Find the greatest number of five digit, which is a perfect square.

355) Evaluate $\sqrt{0.80}$ correct up to two places of decimal.

356) If $\sqrt{x} + 43 = \sqrt{19881}$, then find the value of x.

357) Write the first four square numbers.

358) How many non-perfect square natural numbers lie between 18^2 and 19^2 ?

359) Find the value of $\sqrt{16} + \sqrt{81}$

360) How many perfect squares lie between 1 and 50?

361) Find the square of 6.1.

362) Write the unit's place of 168^2

363) Find the square of 0.4

364) Find the sum of first 4 odd natural numbers and write the number, whose square it is.

365) Check, whether 180 is a perfect square or not by using prime factorisation.

366) Find the sum of first n odd natural numbers.

367) Find the square root of $\frac{2704}{81}$

368) Find the value of $\frac{\sqrt{24} + \sqrt{216}}{\sqrt{96}}$

369) How many numbers lie between squares of:
27 and 28

370) How many numbers lie between squares of:
16 and 17

371) How many numbers lie between squares of:
97 and 98

372) Express 169 as the sum of first 13 odd numbers.

373) Write the Pythagorean triplet whose one member is 13.

374) If a number contains 3 zeros at the end, how many zeros will its square have? What do you notice about the number of zeros at the end of the number and the number of zeros at the end of its square? Can we say square numbers can only have even number of zeros at the end ?

375) How many numbers are there between 6^2 and 7^2 ?

376) Check for n = 5, verify

377) Check for n=6 etc. and verify

378) $1 + 3 + 5 + 7 \dots = 16 = 4^2$
 $1 + 3 + 5 + 7 + 9 \dots = 25 = 5^2$
 $1 + 3 + 5 + 7 + 9 + 11 \dots = 36 = 6^2$

379) Arrange the numbers from 1 to 20 in a row such that the sum of any two adjacent numbers is a perfect square.

92 x 3 = 276

380) Express the following as the sum of two consecutive integers. 21^2

381) Express the following as the sum of two consecutive integers. 13^2

382) Observe the following pattern and find the missing digits.

$$11^2 = 121$$

$$101^2 = 10201$$

$$1001^2 = 1002001$$

$$100001^2 = 1 \dots \dots \dots 2 \dots \dots \dots 1$$

$$10000001^2 = \dots \dots \dots \dots \dots \dots$$

383) Observe the following pattern and supply the missing numbers.

$$11^2 = 121$$

$$101^2 = 10201$$

$$10101^2 = 102030201$$

$$1010101^2 = \dots \dots \dots$$

$$\dots \dots \dots ^2 = 10203040504030201$$

384) Using the given pattern, find the missing numbers

$$1^2 + 2^2 + 2^2 = 3^2$$

$$2^2 + 3^2 + 6^2 = 7^2$$

$$3^2 + 4^2 + 12^2 = 13^2$$

$$4^2 + 5^2 + \underline{2} = 21^2$$

$$5^2 + \underline{2} + 30^2 = 31^2$$

$$6^2 + 7^2 + \underline{2} = \underline{2}^2$$

385) Without adding, find the sum. $1 + 3 + 5 + 7 + 9$

386) Without adding, find the sum.

$$1 + 3 + 5 + 7 + 9 + 11 + 13 + 15 + 17 + 19$$

387) Without adding, find the sum.

$$1 + 3 + 5 + 7 + 9 + 11 + 13 + 15 + 17 + 19 + 21 + 23$$

388) By repeated subtraction of odd number starting from 1, find whether the following numbers are perfect squares or not. If the number is a perfect square, then find its square root. 121

389) By repeated subtraction of odd number starting from 1, find whether the following numbers are perfect squares or not. If the number is a perfect square, then find its square root. 55

390) By repeated subtraction of odd number starting from 1, find whether the following numbers are perfect squares or not. If the number is a perfect square, then find its square root. 36

391) By repeated subtraction of odd number starting from 1, find whether the following numbers are perfect squares or not. If the number is a perfect square, then find its square root. 49

392) By repeated subtraction of odd number starting from 1, find whether the following numbers are perfect squares or not. If the number is a perfect square, then find its square root. 90

393) Find the square roots of the following numbers by the prime factorisation method. 729

394) Find the square roots of the following numbers by the prime factorisation method. 400

395) Find the square roots of the following numbers by the prime factorisation method. 1764

396) Find the square roots of the following numbers by the prime factorisation method. 4096

397) Find the square roots of the following numbers by the prime factorisation method. 7744

398) Find the square roots of the following numbers by the prime factorisation method. 9604

399) Find the square roots of the following numbers by the prime factorisation method. 5929

400) Find the square roots of the following numbers by the prime factorisation method. 9216

401) Find the square roots of the following numbers by the prime factorisation method. 529

402) Find the square roots of the following numbers by the prime factorisation method. 8100

403) 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

404) 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

405) 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

406) 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

407) 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

408) 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

409) 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

410) 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

411) 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

412) 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

413) 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

414) 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.

415) 2025 plants are to be planted in a garden in such a way that each row contains as many plants as the number of plants in each row.

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

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

418) Can we say that, if a perfect square is of n digits, then its square root will have $\frac{n}{2}$ digits, if n is even?

419) Can we say that, if a perfect square is of n digits, then its square root will have $\frac{(n+1)}{2}$, if n is odd?

420) Estimate the value of the following to the nearest whole number. $\sqrt{80}$

421) Estimate the value of the following to the nearest whole number. $\sqrt{1000}$

422) Estimate the value of the following to the nearest whole number. $\sqrt{350}$

423) Estimate the value of the following to the nearest whole number. $\sqrt{500}$

424) 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

425) 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

426) 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

427) 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

428) 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

429) 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 of the perfect square so obtained. 525

430) 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 of the perfect square so obtained. 1750

431) 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 of the perfect square so obtained. 252

432) 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 of the perfect square so obtained. 1825

433) 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 of the perfect square so obtained. 6412

434) Find the length of the side of a square whose area is 441 m^2

435) A gardener has 1000 plants. He wants to plant these in such a way that the number of rows and the number of columns remains same. Find the minimum number of plants he needs more for his.

436) There are 500 children in a school. For a PT 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?

437) In a right triangle ABC, $\angle B = 90^\circ$. If AB = 12 cm, BC = 5 cm, then find AC.

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

439) Write a Pythagorean triplet whose smallest member is 8.

440) Find a Pythagorean triplet in which one member is 12.

441) Is 90 a perfect square?

442) 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.

443) Find the square root of 729

444) Find the square root of 1296

445) Find the length of the side of a square, if the length of its diagonal is 10 cm.

446) Find the least number by which we multiply to the 11760, so that we can get perfect number.

447) Find the least possible positive numbers which should be added to 575 to make a perfect square number.

448) Find the least possible number, which must be subtracted from 575 to make a perfect square number.

449) If $\sqrt{289} \div \sqrt{x} = \frac{1}{5}$, then find the value of x.

450) 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

451) In a right angled d ABC, $\angle B = 90^\circ$. If AB = 6 cm and BC = 8 cm, find AC.

452) In a right angled d ABC, $\angle B = 90^\circ$. If AC = 13 cm and BC = 5 cm, find AB.

453) Using distributive law, find the square of 43.

454) Write the Pythagorean triplets, whose smallest number is 18.

455) Find the area of a square field, if its perimeter is 96 m.

456) Find the length of a diagonal of a rectangle with dimensions 20 m by 15 m.

457) Using prime factorisation, find the square roots of 11025

458) Using prime factorisation , find the square roots of 4761

459) Evaluate the square root of 22.09 by long division method.

460) Find the least square number, which is divisible by 3, 4, 5, 6 and 8.

461) Show that 600 is not a perfect square.

462) Find the length of the side of a square, whose area is 729 m^2 .

463) Find the square root of the following by long division method 1369

464) Find the square root of the following by long division method 5625

465) Find the value of $\sqrt{248 + \sqrt{52 + \sqrt{144}}}$

466) Find the square of 27.

467) Write a Pythagorean triplet whose one member is 15.

468) Is 1008 a perfect square? If not, find the smallest multiple of 1008 which is a perfect square and then find the square root of the new number.

469) Find the smallest whole number by which 288 should be divided so as to get a perfect square. Also find the square root of the resulting number.

470) Find the length of the side of a square whose area is 676 m^2 .

471) Find the least number which must be added to the numbers so as to get a perfect square. Also find the square root of the perfect square so obtained. 525

2 x 4 = 8

472) Leela invited some friends for tea on her birthday. Her mother placed some plates and some puris on a table to be served. If Leela places 4 puris in each plate 1 plate would be left empty. But if she places 3 puris in each plate 1puri would be left. Find the number of plates and number of puris on the table.

473) Is there a number which is equal to its cube but not equal to its squares? If yes find it.

19 x 5 = 95

474) Find the square roots of 100 by the method of repeated subtraction.

475) Find the square roots of 169 by the method of repeated subtraction.

476) Find the value of $\frac{\sqrt{25.4016} - \sqrt{1.0609}}{\sqrt{25.4016} + \sqrt{1.0609}}$

477) If the expression $X \times 809436 \times 809436$ be a perfect square, then find the value of x.

478) If $(46)^2$ is subtracted from the square of a number, then answer so obtained is 485. What is the number?

479) Find the least number, which is a perfect square and has 7936 as one of its factors.

480) The sum of two numbers, when multiplied with each of the numbers separately, then the result of the above multiplications are 2418 and 3666, respectively. Find the difference between the numbers.

481) A ladder 10 m long rests against a vertical wall. If the foot of the ladder is 6 m away from the wall and the ladder just reaches the top of the wall, how high is the wall?

482) The area of a rectangular field whose length is twice its breadth, is 2450 m^2 . Find the perimeter of the field.

483) 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.

484) During a mass drill exercise, 6250 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 9 children are left out. Find the number of children in each row of the square. What is the value depicted from the exercise?

485) Find three numbers in the ratio $2 : 3 : 5$, the sum of whose squares is 608.

486) Find the square root of 324 by the method of repeated subtraction.

487) The perimeters of two squares are 40 m and 96 m, respectively. Find the perimeter of another square, equal in area to the sum of the first two squares.

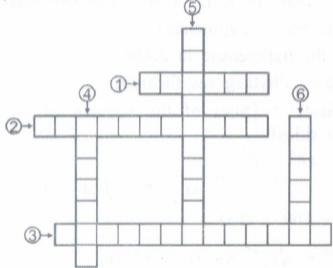
488) The area of a square plot is $101\frac{1}{100}\text{m}^2$. Find the length of one side of the plot.

489) In a right angled Δ ABC, if $\angle B=90^\circ$, AB=12 cm and BC=5 cm, then find AC.

490) Each student of Class VIII contributed some money for a picnic. The money contributed by each student was equal to square of the total number of students. If the total collected amount was 2209, then find the total numbers students. What value depict here?

491) We check 256 is a perfect square or not.

492) Complete the following crossword puzzle using the given direction.



Direction:

Across:

(1) The product of number by itself two times, is called its _____

(2) If three numbers a, b and c are such that $a^2 + b^2 = c^2$ then they are called _____ Triplets.

(3) A number is a when it is a product of the same two numbers.

Down: (4) The numbers $2n$, n^2-1 and $n^2 + 1$ where n is a natural number show Pythagorean _____.

(5) Finding is the inverse operation of squaring a number.

(6) A number which divides a _____ given number exactly is called a divisor of that number.
