



MATHS

BOOKS - VGS PUBLICATION-BRILLIANT

SQUARE ROOT AND CUBE ROOTS



1. Find the perfect squares between 100 and

150





3. Is 56 a perfect square?Give reasons.



4. Guess and give reason which of the following numbers are perfect squares.verify from the above table:84.



5. Guess and give reason which of the following numbers are perfect squares.verify

from the above table:108.



6. Guess and give reason which of the following numbers are perfect squares.verify from the above table: 271.

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7. Guess and give reason which of the following numbers are perfect squares.verify

from the above table:529.

8. Guess and give reason which of the following numbers are perfect squares.verify from the above table:529.
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9. Which of the following have one in its units place : 126^2 .

10. Which of the following have one in its units

place : 179^{2} .

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11. Which of the following have one in its units place : 281^2 .

12. Which of the following have one in its units

place : 363^2 .

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13. Vaishnavi claims that the square of even numbers are even and square of odd are odd.Do you agree with her? Justify.



14. Guess, how many digits are there in the squares of 72.
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15. Guess, how many digits are there in the

square of 103

16. Guess, how many digits are there in the square of 1000
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17. How many perfect cubes are there between

500 and 1000?



18. Sangeetha said that each time you add two integers, the value of the sum is greater than the numbers. Is sangeetha right? Give reasons

for your answer.

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19. What will be the units digit of the square of

the following numbers :297.

20. What will be the units digit of the square

of the following numbers :39.



21. What will be the units digit of the square of

the following numbers :297.

22. What will be the units digit of the square

of the following numbers : 5125.

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23. What will be the units digit of the square

of the following numbers :7286.

24. What will be the units digit of the square

of the following numbers :8742.



25. Write all the factors of the following numbers 115







31. Which of the perfect cubes? 400



34. Which of the perfect cubes? 729



35. What is a smallest number by which 2560 is to be multiplied so that the product is a perfect cube?

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36. What is a smallest number by which 1600 is to be divided so that the quotient is a perfect cube?





39. Find the cube of the number 21.





41. Test whether the given number is perfect

cube or not: 243

42. Test whether the given number is perfect

cube or not: 516

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43. Test whether the given number is perfect

cube or not: 243

44. Test whether the given number is perfect

cube or not: 8000

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45. Test whether the given number is perfect

cube or not: 2700



46. Find the smallest number by which 8788

must be multiplied to obtain a perfect cube?

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47. What smallest number should 7803 be multiplied with so that the product becomes a perfect cube?

48. Find the smallest number by which 8640 must divided so that the quotient is a perfect cube.



49. Ravi made a cuboid of plasticine of dimensions 12 cm, 8 cm and 3 am. How many minimum number of such cuboids will be needed to form a cube?

50. Find the smallest prime number dividing the sum $3^{11} + 5^{13}$

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51. Find the cube root of 4096?

52. Find the cube root of the number by prime

factorization method: 343

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53. Find the cube root of the number by prime

factorization method: 729

54. Find the cube root of the number by prime

factorization method: 1331

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55. Find the cube root of the number by prime

factorization method: 2744

56. Find the cube root of the number through

estimation: 512

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57. Find the cube root of the number through

estimation: 2197



58. Find the cube root of the number through

estimation: 3375

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59. Find the cube root of the number through

estimation: 5832



60. True or False: Cube of an even number is

an odd number.

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61. True or False: A perfect cube may end with

two zeros.



62. True or False: If a number ends with5, then

its cube ends with 5.

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63. True or False: Cube of a number ending

with zero has three zeros at its right.



64. True or False: Cube of an even number is

an odd number.

Watch Video Solution

65. True or False: Cube of an even number is

an odd number.

66. True or False: The cube of a two digit

number may be a three digit number.



67. Find the two digit number which is a

square number and also a cubic number.



68. If a, b and c are Pythagorian triplet, which of the following statement is true ?

A.
$$a^2-b^2=c$$

B.
$$a^2+b^2=c^2$$

C. b=
$$c^2 - a^2$$

D.
$$a^2 > b^2$$
 + c^2

Answer:



1. The following numbers are not perfect

squires. Give reasons:257.

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2. The following numbers are not perfect

squares. Give reasons: 4592.

3. The following numbers are not perfect

squares. Give reasons: 2433.



4. The following numbers are not perfect

squares. Give reasons: 5050.

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5. The following numbers are not perfect squires. Give reasons: 6098.



7. Find whether the square of the following

numbers are even or odd : 2826.
8. Find whether the square of the following

numbers are even or odd : 8204.



9. Find whether the square of the following

numbers are even or odd : 17779.

10. Find whether the square of the following

numbers are even or odd : 99998.

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11. How many numbers lie between the square

of the following numbers:25 and 26.

12. How many numbers lie between the square

of the following numbers:56, 57.

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13. How many numbers lie between the square

of the following numbers: 107:108.

14. Without adding, find the sum of the following numbers : 1+3+5+7+9.

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15. Without adding, find the sum of the

:

following numbers

1+3+5+7+9+11+13+15+17+19+21+23+25

16. Without adding, find the sum of thefollowing numbers :

1+3+5+7+9+11+13+15+17+19+21+23+25

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17. Check whether the following numbers form

Pythagorean triplet : 2,3,4.

18. Check whether the following numbers form

Pythagorean triplet : 6, 8, 10.

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19. Check whether the following numbers form

Pythagorean triplet : 9, 10, 11.

20. Check whether the following numbers form

Pythagorean triplet : 8, 15, 17.

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21. Check whether the following numbers form

Pythagorean triplet : 2,3,4.



22. By subtraction of successive odd numbers find whether the following numbers are perfect squares or not :55



23. By subtraction of successive odd numbers

find whether the following numbers are

perfect squares or not :90.



24. By subtraction of successive odd numbers find whether the following numbers are perfect squares or not : 121.

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25. Find the square root of 1296 by Prime Factorization.

26. Find the square root of 2025.



27. Find the smallest number by which 720

should be multiplied to get a perfect square.

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28. Find the smallest number by which 6000 should be divided to get a perfect square and

also find the square root of the resulting number.



29. Find the square root of the following

numbers by prime factorization method :441.

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30. Find the square root of the following numbers by prime factorization method: 784



31. Find the square root of the following numbers by prime factorization method: 4096.



32. Find the square root of the following numbers by prime factorization method : 7056.





33. Find the smallest number by which 3645

must be multiplied to get a perfect square :



34. Find the smallest number by which 2400 is

to be multiplied to get a per-. fect square and

also find the square.



35. Find the smallest number by which 7776 is

to be divided to get a perfect square:

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36. 1521 trees are planted in a garden in such a way that there are as many trees in each row as there are rows inthe garden. Find the number of rows and number of trees in each row.



37. Aschool collected 2601 as fees from its students. If fee paid by each student and number of students in the school were equal, how many students were there in the school?.

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38. Aschool collected 2601 as fees from its students. If fee paid by each student and number of students in the school were equal, how many students were there in the school?.



39. The product of two numbers is 1296. If one number is 16 times the other,find the two numbers.



40. 7921 soldiers sat in an auditorium in such a

way that there are as inany soldiers in a row as

there are rows in the auditorium.how many

rows are there in the Auditorium.



41. the area of the square field is $5184m^2$ Find the area of a rectangular field, whose perimeter is equal to the perimeter of the square field andwhose length is twice of its breadth.



42. Observe the following divisions, give reasons why 8 in the divisor 48 is considered in the above example? $4)_{384}^{384} (9) \qquad 4)_{384}^{384} (8) \qquad 4)_{384}^{384} (7) \qquad 4)_{38}^{384} (7) \qquad 4)_{38}^{38} (7) \qquad 4)_{$

49

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64

81

43. Find the square root of 1296 by Prime Factorization.

44. Find the square root of 8281..



45. Find the least perfect square with four digits.

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46. Find the least number that is to be subtracted from 4000 to make it perfect



48. Find $\sqrt{96.04}$

49. Find the square root of the following.

numbers by division method:1089

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50. Find the square root of the following. numbers by division method:2304.

51. Find the square root of the following.

numbers by division method:7744.

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52. Find the square root of the following. numbers by division method: 6084.

53. Find the square root of the following.numbers by division method: 9025.Watch Video Solution

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



55. Find the square root of the following

decimal numbers :18.49

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56. Find the square root of the following

decimal numbers : 68.89.

57. Find the square root of the following

decimal numbers :84.64.

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58. Find the least number that is to be subtracted from 4000 to make it perfect square

59. Find the length of the side of a square

whose area is 4489 sq.cm.

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60. A gardener wishes to plant 8289 plants in the form of a square and found that there wwere 8 plants left. How many plants were planted in each row?

61. Find the least perfect square with four

digits.



62. Find the least number which must be added to 6412 to make it a perfect square.

63. Estimate the value of the numbers to the

nearest whole number: $\sqrt{97}$

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64. Estimate the value of the numbers to the

nearest whole number: $\sqrt{250}$



65. Estimate the value of the numbers to the

nearest whole number: $\sqrt{780}$

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66. Is 81 a perfect cube?

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67. Is 125 a perfect cube?

68. How many perfect cube numbers are present between 1 and 100, 1 and 500, 1 and 1000?

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69. How many perfect cubes are there between

500 and 1000?

70. Find the digit in units place of each of the numbers: 75³
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71. Find the digit in units place of each of the numbers: 123^3

72. Find the digit in units place of each of the numbers: 157³
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73. Find the digit in units place of each of the numbers: 198^3



74. Find the digit in units place of each of the

numbers: 123^3

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75. Which of the following is Pythagorean Triplet ?

A. (1,2,2)

B. (4,5,6)

C. (3,4,5)

D. (5, 6, 7)

Answer:

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76. Which of the following number is doesn't lie in the units place of a square number?

A. 1

B.4

C. 3

D. 5

Answer:

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77. Which of the following is not a per fect square number?

A. 121

B. 625

C. 1024

D. 367

Answer:

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78.
$$\sqrt{625} + \sqrt{441}$$

A. 47

$\mathsf{B.}\,\sqrt{1066}$

C. 46

D. 45


79. The units digit of $(1234562)^2$

A. 6

B. 3

C. 8

D. 4



80. కింది క్రమాన్ని గమనించండి. $111^2 = 12321$

A. 12341

B. 12321

C. 12312

D. 12221

Answer:

81. 1+3+5 + 7 + 9,=

A. 9^2

 $\mathsf{B.}\,7^2$

 $\mathsf{C.}\,5^2$

 $\mathsf{D.}\,4^2$

Answer:

82. find the square root (10201)

A. 1001

B. 101

C. 111

D. 121



83. No. of integers lie between 4^2 and 5^2

A. 8

B. 10

C. 9

D. 11

Answer:

84. $5.6789\overline{1}$ is a..... number.

A. prime

B. odd

C. even

D. none

Answer:

85. Which of the following is a perfect cube number ? .

A. 25

B. 64

C. 81

D. 100

Answer:

86. No. of non-perfect square numbers between n^2 and $(n+1)^2$ are

A.
$$\frac{n}{2}$$

B. 2n

 $\mathsf{C}.\,n^2$

D. n



87. If there are no common factors other than'l' among a, b, c then the triplet is called

A. Primitive

а

B. Secondary

C. Triplet

D. None

Answer:

88. $13^2 = +12^2$

A. 10

B. 2

 $C. 5^{2}$

D. 10



89. Sqrt(225)

A. 12

B. 16

C. 15

D. 13

Answer:

90. $\sqrt{2025} = \dots$

A. 35

B.45

C. 54

D. 15

Answer:

91. Find the smallest number by which 3645 must be multiplied to get a perfect square :

A. 19

B. 16

C. 10

D. 15

Answer:

92. Find the smallest number by which 720 should be multiplied to get a perfect square.

A. 13

B. 9

C. 5

D. 10

Answer:

93. _____should be subtracted from 4215 to

become a perfect square number.

A. 119

B. 120

C. 110

D. 1

Answer:

94. Find the square root of 42.25 using division method.

A. 7

B. 6.5

C. 8.5

D. 5.5



95. The nearest value of $\sqrt{300}$ = ___

A. 19

B. 31

C. 17

D. 16

Answer:

96. The side of a square is 19 units then its area is___sq. units, A. 312 B. 191 C. 163 D. 361 **Answer:**

97. The area of a square is 1024 sq.units, then

its side is ____units.

A. 32

B. 22

C. 62

D. 92

Answer:

98. The cube of 11 is____

A. 1131

B. 1331

C. 1231

D. 1431

Answer:

99. The perfect square and cube number of a

two digited number is __

A. 32

B. 91

C. 16

D. 64

Answer:

100. Sum of 20 terms of 3 + 5 + 7 + 9 +is

A. 3³
B. 3⁴
C. 3⁵

 $\mathsf{D.}\,3^{10}$

Answer:



101. Find the approximate value of $\sqrt[3]{999}$

A. 27

B. 13

C. 18

D. 17

Answer:

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102. The units digit of $(1234562)^2$

B. 3

C. 9

D. 4

Answer:

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103. Find the smallest number by which 3645

must be multiplied to get a perfect square :

B.40

C. 25

D. 35

Answer:

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104. Find the approximate value of

 $\sqrt[3]{999}$

B. 21

C. 16

D. 31

Answer:

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A. 1728

B. 1928

C. 1314

D. 1628

Answer:



106. The value of $\sqrt{97}$ is nearer to

A. 14

B. 13

C. 11

D. 10

Answer:

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A. 161

B. 216

C. 116

D. 117

Answer:



108. The side of a square is 72 cm then its perimeter is ____cm.

A. 298

B. 148

C. 288

D. 188

Answer:



109. How many integers are in between the squares of 25, 26.?

A. 50

B. 60

C. 70

D. 100



110. The units digit in the square of 431 is ____

- A. 3
- B. 7
- C. 0
- D. 1



111.
$$(2^4)^2_{----}$$

A. 512

B. 156

C. 258

D. 256



112. 3 ⁵		
A. 243		
B. 81		
C. 813		
D. 432		

Answer:

113. Find the smallest number by which 8788 must be multiplied to obtain a perfect cube?

A. 7

B. 4

C. 2

D. 3

Answer:

114. $\sqrt[3]{2744}$ =

A. 14

B. 24

C. 34

D. 16



115. Sqrt(175.2976)

A. 36.15

B. 81.14

C. 11.24

D. 13.24

Answer:

116.
$$(\sqrt{a})^2 =$$

A. \sqrt{a}
B. 2a

 $\mathsf{C}.\,\frac{a}{2}$

D. a

Answer:

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117. $\sqrt{1471369}$

A. 1213

B. 1321

C. 1132

D. 1141

Answer:



118. The square root of 6084 =

A. 87

B. 78

C. 88

D. 68

Answer:

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119. $\sqrt{2}$ =.....

A. 1.414

B. 1.5

C. 1.811

D. 1.3

Answer:



120.
$$Sqrt169 + \sqrt{25}$$
=.....

A. 18

B. 19

C. 13

D. 12



121. $\sqrt{176(\sqrt{2401})}$ =____

A. 25

- B. 15
- C. 31
- D. 35



122. In the expansion of 3^{11} the units digit is

A. 3

B. 7

C. 10

D. 16

Answer:

123. Car number of Jaya is 8289 then the square root of that number is __

A. 32

B. 70

C. 83

D. None

Answer:

124. $\sqrt{9025}$ =.....

A. 95

B. 59

C. 69

D. 73



125. Without adding, find the sum of the following numbers : 1+3+5+7+9+11+13+15+17+19+21+23+25 A. 132 B. 168 C. 139 D. 169



126. How many cube numbers are there between 1 to 100 ?

A. 9

B. 10

C. 3

D. 13

Answer:

127. Guess, how many digits are there in the squares of 72.

A. 4 or 3

B. 3 or 6

C. 2 or 7

D. None



128. Sqrt(121)=.....

A. 11

B. 16

C. 31

D. 12

Answer:

129. $3^2 + 4^2 = K^2$, K=___

A. 10

B. 13

C. 5

D. 25

Answer:

130. How many Integers are there between 9^2 and 10^2 A. 16 B. 13 C. 28 D. 18

Answer:

131. $\sqrt{55}$ is_____

A. not a square number

B. square number

C. cube number

D. value is 10



A. 9

B. 16

C. 10

D. 4

Answer:

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133. Sum of n odd number is ____

A.
$$n^2$$

B. 2n

C. n

D. n-1

Answer:

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134. Identify Pythagorean Triplet.

A. 1, 2, 7

B. 8, 9, 6

C. 3,4,6

D. 6, 8, 10

Answer:



135. $8^2 + K^2 - 17^2$ then K= __

A. 15

B. 16

C. 19

D. 20

Answer:

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136.
$$\sqrt{4^4 + 5^4}$$
=

A. 4

B. 5

${\rm C.}\,4^2\times5^2$

${\rm D.4\times5}$

Answer:



137.
$$\sqrt{\frac{25}{64}} = -$$

A. $\frac{5}{9}$
B. $\frac{5}{8}$
C. $\frac{15}{31}$
D. $\frac{5}{4}$



138. $\sqrt{1}$ =.....

A. 0

B. 1

C. 6

D. 4



139. $\sqrt{3388}$ =.....

A. $\sqrt[30]{7}$

B. $\sqrt[10]{7}$

C. $\sqrt[12]{7}$

D. $\sqrt[22]{7}$

Answer:

140. $\sqrt[3]{500} + \sqrt[3]{686}$ =.....

A. 16

B. 30

C. 70

D. 80



141. $\sqrt{0.4489}$ =__

A. 0.67

B. 6.7

C. 8.5

D. 7.7

Answer:

142.
$$\sqrt{12} \left(\frac{169}{676} \right) =$$

A.
$$2\left(\frac{4}{5}\right)$$

B. $9\left(\frac{4}{7}\right)$
C. $3\left(\frac{1}{26}\right)$

D. `sqrt3/2



143. 15^3 =____

A. 3375

B. 7375

C. 1375

D. 1525



144. $\sqrt{142884}$ =.....

A. 144

B. 278

C. 178

D. 378



145. $\sqrt{1156}$ = x then x=_____

A. 44

B.34

C. 84

D. 94

Answer:

146. 1, 4, 9, 16, 25 are____numbers.

A. Square

B. Cube

C. Pure

D. None

Answer:

147. $(21)^2 =$ ____

A. 144

B. 441

C. 141

D. 191



148. $(0.2)^2$ = ____

A. 0.4

B. 0.004

C. 0.45

D. 0.04



149.
$$(-2)^3 =$$

A. 8 B. $\frac{1}{8}$ C. $\frac{1}{3^2}$ D. (-8)



150. $\sqrt[3]{64}$ =__

A. 416

B. 189

C. 343

D. 143





Answer:

152. If $n^3 = 2744$ then the value of $n^2 - 11$ is

A. 145

B. 175

C. 165

D. 185





A. 160

B.420

C. 129

D. 120

Answer:

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154.
$$\sqrt{\frac{0.01}{0.81}}$$
=____

A. $\frac{1}{5}$
B.
$$\frac{1}{2}$$

C. $\frac{1}{9}$

Answer:

155.
$$\sqrt{2\frac{14}{25}} =$$

A. $\frac{8}{7}$
B. $\frac{8}{5}$

C.
$$\frac{5}{8}$$

D. $\frac{1}{3}$

Answer:



156. $\sqrt[3]{217}$ =___

A. 7

B. 8

D. none

Answer:

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157. Explain why each of the lists above is a G.P.(i) 1, 4, 16, 64, 256,.....

A. 27

B. 25

Answer:

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158. Which of the following number is called Ramanujans number ?

A. 1729

B. 1728

Answer:

159.
$$\sqrt[3]{0.001331}$$
=__

- A. $(0.011)^2$
- B. 0.11
- $C.(0.11)^2$
- $D.(0.11)^4$

Answer:



160.
$$1^3 + 2^3 =$$

A. 10

 $\mathsf{B.}\,3^3$

 $\mathsf{C.}\ 3^2$

D. 92

Answer:



161. $\sqrt[3]{0.729} - \sqrt[3]{0.343}$ =___

A. 0.5

B. 0.2

C. 0.7

D. 0.45

Answer:

162. Identify perfect cube among the following:

A. 512

B. 14

C. 100

D. 96

Answer:



Answer:

164. If a+b+c=0, prove that $a^3 + b^3 + c^3 = 3abc$ A. $\frac{abc}{3}$ B. 3abc C. ab+c D. $\frac{ab}{c}$

Answer:

165.
$$12^3 + 1^3 =$$

A. 1718

B. 1719

C. 1729

D. 1829

Answer:



166.
$$1^3 + 2^3 + 3^3 =$$

A. 5^2

 $\mathsf{B.}\,6^2$

 $C. 8^{2}$

 $D. 9^2$

Answer:

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167. Cube root of 2545 is ____

A. 10

B. 20

C. 25

D. None

Answer:

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168. Kishore told "Every number isasquare number": Krishna told "Every.number is pure'number".In the above two statements who is correct ?

A. Kishore

B. Krishna

C. Both are correct.

D. Both are false

Answer:

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169. Identify polyndrome number in the following numbers.

A. 15651

B. 16566

C. 15655

D. 165167

Answer:

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170. If $y=x^3$ then

A.
$$x = \sqrt[3]{y}$$

B.
$$x=\sqrt{y}$$

C.
$$\sqrt{x}=y^2$$

D. None

Answer:

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171.
$$\sqrt[3]{9261}$$
=__

A. 11

B. 41

C. 21

D. 14

Answer:



172. If 17 $< \sqrt{x}$ <18,then x=

A. 100

B. 900

Answer:

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173. The number of surfaces of a cuboid is

A. Side

B. Cube

C. Complete cube

D. Cubola



