MATHS

BOOKS - S CHAND IIT JEE FOUNDATION

SQUARE ROOTS AND CUBE ROOTS

Question Bank 4

1. Find the value of $\sqrt{11.981+7\sqrt{1.2996}}$

A. 5.181

B. 3.354

C. 4.467

D. 4.927

Answer: C

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2. What is the least number that must be added to 1901 so that the sum may be a perfect square is

A. 35

B. 32

C. 30

D. 29

Answer: A

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3. The positive square root of 45.5625 is

A. 5.25

B. 5.65

C. 6.35

D. 6.75

Answer: D

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4. The least perfect square number which is divisible by each of 21,36 and 66 is

A. 213444

B. 214344

C. 214434

D. 231444

Answer: B

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5. The square root of $0.3 + 0.21 + 0.49$ is

A. $\sqrt{0.09} + \sqrt{0.49}$

B. $2\sqrt{0.21}$

C. 1

D. 0.58

Answer: C

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6. The least integer that must be added to (9798×9792) to make it a perfect square is

A. 9

B. 8

C. 7

D. 6

Answer: A

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7. Assume that

$\sqrt{13}$=3.605 (approximately)

$\sqrt{130}$=11.40 (approximately)

Find the value of:

$$\sqrt{1.3} + \sqrt{1300} + \sqrt{0.013}$$

A. 36.164

B. 37.304

C. 36.304

D. 37.164

Answer: B

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8. The digit in the units place in the square root of 15876 is (a) 2 (b) 4 (c) 6 (d) 8

A. 8

B. 6

C. 4

D. 2

Answer: B

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9. The smallest number to be added to 680621 to make the sum a perfect square is (a) 4 (b) 5 (c) 6 (d) 8

A. 4

B. 5

C. 6

D. 8

Answer: A

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10. $\sqrt{(0.798)^2 + 0.404 \times 0.798 + (0.202)^2} + 1$ is equal to

A. 0

B. 2

C. 1.596

D. 0.404

Answer: B

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11. What is the least number which should be subtracted from 0.000326 to make it a perfect square? (a) 0.000002 (b) 0.000004 (c) 0.02 (d) 0.04

A. 4.0E-6

B. 2.0E-6

C. 0.04

D. 0.02

Answer: B

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12. Each member of a picnic party contributed twice as many rupees as the total number of members and the total collection was Rs. 3042. The number of members present in the party was

A. 2

B. 32

C. 40

D. 39

Answer: D

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13. What is the least number which must be subtracted from 10420 to make it a perfect square?

A. 219

B. 200

C. 189

D. 16

Answer: D

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14. $\sqrt{86.49} + \sqrt{5 + k^2} = 12.3$. So k is equal to

A. $\sqrt{10}$

B. $2\sqrt{5}$

C. $3\sqrt{5}$

D. 2

Answer: D

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15. The number whose square is equal to the difference of the squares of 75.15 and 60.12 is

A. 46.09

B. 48.09

C. 45.09

D. 47.09

Answer: C

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16. If $\sqrt{1369}+\sqrt{.0615+x}=37.25$, then x is equal to 10^{-1} (b) 10^{-2} (c) 10^{-3} (d) None of these

A. 10^{-1}

B. 10^{-2}

C. 10^{-3}

D. 10

Answer: C

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17. If $\sqrt{(x-1)(y+2)} = 7$, x and y being positive whole numbers, then the values of x and y respectively are (a) 8, 5 (b) 15, 12 (c) 22, 19 (d) None of these

A. 8,5

B. 15,12

C. 22,19

D. 6,8

Answer: A

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18. If $\sqrt{0.04 \times 0.4 \times a} = 0.004 \times 0.4 \times \sqrt{b}$, then $\frac{a}{b}$ is

A. 16×10^{-3}

B. 16×10^{-4}

C. 16×10^{-5}

D. 16×10^{-2}

Answer: C

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19. If $a = 0.1039$, then the value of $\sqrt{4a^2 - 4a + 1} + 3a$ is (a) 0.1039 (b) 0.2078 (c) 1.1039 (d) 2.1039

A. 0.1039

B. 0.2078

C. 1.1039

D. 2.1039

Answer: C

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20. If $3a = 4b = 6c$ and $a + b + c = 27\sqrt{29}$, then $\sqrt{a^2 + b^2 + c^2}$ is $3\sqrt{29}$ (b) 81 (c) 87 (d) None of these

A. $3\sqrt{29}$

B. 81

C. 87

D. 29

Answer: C

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21. If $3\sqrt{5}+\sqrt{125}=17.84$then $\sqrt{80}+6\sqrt{5}=$

A. 13.41

B. 20.46

C. 21.66

D. 22.35

Answer: D

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22. The number of trees in each row of a garden is equal to the total number of rows in the garden. After 111 trees have been uprooted in a storm, their remain 10914 trees in the garden. The number of rows of trees in the garden is

A. 100

B. 105

C. 115

D. 125

Answer: B

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23. If the product of four consecutive natural numbers increased by a natural number p , is a perfect square, then the value of p is (a) 1 (b) 2 (c) 4 (d) 8

A. 8

B. 4

C. 2

D. 1

Answer: D

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24. $\sqrt[3]{(0.000064)}$ is equal to

A. 0.02

B. 0.2

C. 2

D. 0.04

Answer: D

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25. $\sqrt[2]{\sqrt[3]{x \times 0.000001}} = 0.2$. The value of x is

A. 8

B. 16

C. 32

D. 64

Answer: D

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26. The digit in the units place in the cube root of 21952 is

A. 8

B. 6

C. 4

D. 2

Answer: A

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27. Cube root of a number when divided by 5 results in 25 what is the number?

A. 5

B. 125^3

C. 5^2

D. 125

Answer: B

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28. The smallest of $\sqrt{8}+\sqrt{5}, \sqrt{7}+\sqrt{6}, \sqrt{10}+\sqrt{3}$ and $\sqrt{11}+\sqrt{2}$ is

A. $\sqrt{8}+\sqrt{5}$

B. $\sqrt{7}+\sqrt{6}$

C. $\sqrt{10}+\sqrt{3}$

D. $\sqrt{11}+\sqrt{2}$

Answer: D

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29. The smallest positive integer n , for which $864n$ is a perfect cube, is (a) 1 (b) 2 (c) 3 (d) 4

A. 1

B. 2

C. 3

D. 4

Answer: B

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30. $\sqrt[3]{\sqrt[3]{a^3}}$ is equal to

A. a

B. 1

C. $a^{1/3}$

D. a^3

Answer: C

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Self Assessment Sheet 4

1. If $\sqrt{(x-1)(y+2)} = 7$, x and y being positive whole numbers, then the values of x and y respectively are (a) 8, 5 (b) 15, 12 (c) 22, 19 (d) None of these

A. 8,5

B. 15,12

C. 22,19

D. None of these

Answer: A

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2. Simplify:

$$\sqrt{\left[(12.1)^2-(8.1)^2\right]\div\left[(0.25)^2+(0.25)(19.95)\right]}$$

.

A. 1

B. 2

C. 3

D. 4

Answer: D

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3. Consider the following values of the three given numbers $\sqrt{103}$, $\sqrt{99.35}$, $\sqrt{102.20}$

1. 10.1489 (approx)

2. 10.109(approx)

3. 9.967 (approx)

The correct sequence of these values matching with the above numbers is

A. 1,2,3

B. 1,3,2

C. 2,3,1

D. 3,1,2

Answer: B

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4. What value should come is place of the question mark (?) in the following equation?

$$48\sqrt{?} + 32\sqrt{?} = 320$$

A. 16

B. 2

C. 4

D. 32

Answer: A

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5. Which is greatest $\left(\sqrt{7}+\sqrt{10}\right)$ ro$\sqrt{3}+\sqrt{19}\Big)$?

A. $\sqrt{7}+\sqrt{10}$

B. $\sqrt{3}+\sqrt{19}$

C. both are equal

D. None of these

Answer: B

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6. Find the least number which if added to 17420 will make it a perfect square?

A. 3

B. 5

C. 9

D. 4

Answer: D

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7. Calculate the value of N in the given series and then find the value of x suing the given equation.

$99 \quad 163 \quad N \quad 248 \quad 273 \quad 289$

If $\sqrt{2N+17} = x$, then x equals

A. 20.5

B. 20

C. 21.5

D. 21

Answer: D

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8. The largest number of five digits , which is perfect square is

A. 99900

B. 99856

C. 99981

D. 99801

Answer: B

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9. If $99 \times 21 - \sqrt[3]{x} = 1968$ then x equals

A. 1367631

B. 1366731

C. 1367

D. 111

Answer: A

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10. If p = 999, then the value of $3\sqrt{p(p^2+3p+3)+1}$ is

A. 1000

B. 999

C. 1002

D. 998

Answer: A

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