

BHARAT SCHOOL OF BANKING

SQUARE ROOT AND CUBE ROOT

Q 1. Find the square root of 5929

- a. 49
- b. 33
- c. 77
- d. 73

Correct Option: (c)

Remember the trick discussed in Quick Tips and Tricks

Step 1: Split the number 59 29

$7^2 = 49$ is the nearest number to 59. Hence, the digit in ten's place is 7.

Step 2: Last digit of number 29 is 9. Therefore, 3 or 7 are the digits in unit's place.

Multiply 3 by next consecutive higher number i.e. 4

$$3 \times 4 = 12$$

But $12 < 59$, hence consider the largest number among 3 and 7.

The digit in unit's place is 7.

Hence, the square root of 5929 is 77

Q 2. Find the cube root of 1728.

- a. 12
- b. 14
- c. 16
- d. 18

Correct Option: (a)

Hint: This type of questions can be easily solved by resolving the given number as the product of prime factors select one common factor among the repeated factors.

The number, 1728 is easily divisible by 2, 4, 8, 12, etc. Selecting the greater number 12 will reduce the taken consumed to solve the problem.

BHARAT SCHOOL OF BANKING

SQUARE ROOT AND CUBE ROOT

12	1728
12	144
12	12
	1

$$1728 = 12 \times 12 \times 12 = 12^3$$

Q 3. Find the value of 151

- a. 12.459
- b. 12.292
- c. 13.591
- d. None of these

Correct Option: (b)

Hint:

Trick to find the square root of numbers which are not perfect squares.

Step 1: Find the closet square to 151. 144 is the closest square, its square root is 12.

Step 2: Now divide the given number by the square root of closest square i.e. 12

$$\frac{151}{12} = \frac{7}{12} = 12.583$$

Step 3: Take the average of 12.583 and the square root of the closest number.

$$\frac{12 + 12.583}{2} = 12.2915 = 12.292$$

151 = 12.292 is the approximate value upto 3 decimal places

Q 4. Find is the value of

$$\sqrt{10 + \sqrt{27 + \sqrt{65 + \sqrt{256}}}}$$

- a. 9
- b. 8
- c. 6

BHARAT SCHOOL OF BANKING

SQUARE ROOT AND CUBE ROOT

d. 4

Correct Option: (d)

$$\sqrt{10 + \sqrt{27 + \sqrt{65 + \sqrt{256}}}}$$

Square root of 256 is 16

$$\sqrt{10 + \sqrt{27 + \sqrt{65 + 16}}}$$

$$\sqrt{10 + \sqrt{27 + \sqrt{81}}}$$

Square root of 81 is 9

$$\sqrt{10 + \sqrt{27 + 9}}$$

$$\sqrt{10 + \sqrt{36}}$$

Square root of 36 is 6

$$10 + 6 = 16 = 4$$

Q 5. Find the value of

$$\sqrt[3]{\sqrt{.000729}}$$

- a. 0.3
- b. 0.7
- c. 0.09
- d. None of these

Correct Option: (a)

$$\sqrt[3]{\sqrt{.000729}}$$

Step 1: First find 0.000729

BHARAT SCHOOL OF BANKING

SQUARE ROOT AND CUBE ROOT

$$\sqrt{\frac{729}{10^6}} = \frac{27}{10^3} = \frac{27}{1000} = .027$$

Step 2:

The value of

$$\sqrt[3]{\sqrt{.000729}}$$
$$\sqrt[3]{.027} = \sqrt[3]{\frac{27}{1000}} = \frac{3}{10} = 0.3$$

Type 2: Find the missing number

Q 6. $19.36 + 9 + (?)^2 = 9.4$

- a. 3.5
- b. 4
- c. 4.4
- d. 5

Correct Option: (b)

Let the unknown number be x.

Step 1: Firstly, find the value of 19.36

$$19.36 = 4.4$$

Step 2:

$$4.4 + 9 + (x)^2 = 9.4$$

$$9 + (x)^2 = 5$$

Squaring both the sides, we get

$$9 + x^2 = 25$$

$$x^2 = 16$$

$$x = 4$$

Q 7. If $0.09 \times 0.9 \times a = 0.009 \times 0.9 \times b$, then $\frac{a}{b}$ is _____

BHARAT SCHOOL OF BANKING

SQUARE ROOT AND CUBE ROOT

- a. 9×10^{-3}
- b. 9×10^{-5}
- c. 81×10^{-4}
- d. 81×10^{-5}

Correct Option: (d)

The given question can be written in the form of $\frac{a}{b}$

$$\frac{a}{b} = \frac{0.009 \times 0.9}{0.09 \times 0.9}$$

Squaring both sides, we get

$$\frac{a}{b} = \frac{0.009 \times 0.9 \times 0.009 \times 0.9}{0.09 \times 0.9} = \frac{0.0000729}{0.09} = \frac{0.00729}{9} \quad 0.00081 = 81 \times 10^{-5}$$

Q 8. $28x + 1426 = \frac{3}{4}$ of 2984. Find x

- a. 659
- b. 694
- c. 841
- d. 859

Correct Option: (c)

$$28x + 1426 = \frac{3}{4} \text{ of } 2984.$$

$$28x + 1426 = \frac{3}{4} \times 2984 = 2238$$

$$28x = 2238 - 1426 = 812$$

$$x = 29$$

$$x = 841$$

Type 3: Find the value of _____

Q 9. If $15625 = 125$, then find the value of $(156.25 + 1.5625 + 0.015625 + 0.00015625)$

- a. 1.38875
- b. 13.8875
- c. 138.875
- d. 1388.75

BHARAT SCHOOL OF BANKING

SQUARE ROOT AND CUBE ROOT

Correct Option: (b)

Write the given expression without decimal points.

$$\sqrt{\frac{15625}{100}} + \sqrt{\frac{15625}{10^4}} + \sqrt{\frac{0.015625}{10^6}} + \sqrt{\frac{0.00015625}{10^8}}$$
$$\frac{\sqrt{15625}}{10} + \frac{\sqrt{15625}}{100} + \frac{\sqrt{15625}}{1000} + \frac{\sqrt{15625}}{10000}$$

We are given, $15625 = 125^2$

Therefore,

$$\frac{125}{10} + \frac{125}{100} + \frac{125}{1000} + \frac{125}{10000} = 12.5 + 1.25 + 0.125 + 0.0125 = 13.8875$$

Q 10. If $3^n = 2187$, then , find the value of n

- a. 7
- b. 9
- c. 11
- d. 14

Correct Option: (d)

$$2187 = 3^7$$

$$3^n = 3^7$$

Squaring both the sides, we get

$$3^n = (3^7)^2$$

$$3^n = 3^{14}$$

Therefore, $n = 14$