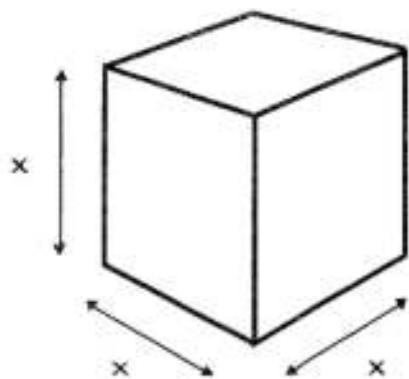


$\sqrt[3]{\quad}$ CUBE ROOT



THE CUBE AND CUBE ROOT

Consider X as the cube root and Y as the cube.
To cube a number, multiply it 3 times.

If X=2, the cube of 2 would be $2 \times 2 \times 2 = 8$

If X= 4, the cube of 4 would be $4 \times 4 \times 4 = 64$

If Y=27, the cube root would be 3 because
 $3 \times 3 \times 3 = 27$

$$X^3 = Y$$

$$\sqrt[3]{Y}$$

Calculate the cube:

1. $x = 3$

2. $x = 9$

3. $x = 1.5$

4. $x = -4$

5. $x = 10$

6. $x = -8$

7. $x = 6$

8. $x = .5$

Calculate the cube root :

1. $\sqrt[3]{216}$

2. $\sqrt[3]{512}$

3. $\sqrt[3]{27}$

4. $\sqrt[3]{1331}$

5. $\sqrt[3]{8}$

6. $\sqrt[3]{729}$

7. $\sqrt[3]{64}$

8. $\sqrt[3]{1000}$

9. $\sqrt[3]{125}$

10. $\sqrt[3]{343}$

11. $\sqrt[3]{1}$

12. $\sqrt[3]{-216}$

13. $\sqrt[3]{1728}$

14. $\sqrt[3]{1000000}$

15. $\sqrt[3]{2744}$

16. $\sqrt[3]{3375}$

Name: _____

Date: _____

The **square** of a number is the number times itself.

$$5^2 = 5 \times 5 = 25$$

The **cube** of a number is the number multiplied twice by itself.

$$5^3 = 5 \times 5 \times 5 = 125$$



Write the **square** or **cube** of each number.

A. $4^2 = 4 \times 4 = 16$

9² = _____

3³ = _____

B. $6^3 =$ _____

7² = _____

15³ = _____

C. $10^3 =$ _____

5³ = _____

14² = _____

D. $20^2 =$ _____

24³ = _____

19³ = _____

E. $8^3 =$ _____

13² = _____

48² = _____

F. $17^2 =$ _____

25³ = _____

37² = _____

Write the **square** root.

G. $36 = 6^2$ 64 = _____ 81 = _____ 25 = _____ 324 = _____ 529 = _____

H. 100 = _____ 49 = _____ 4 = _____ 16 = _____ 121 = _____ 1,600 = _____

I. 400 = _____ 225 = _____ 625 = _____ 144 = _____ 900 = _____ 2,500 = _____

Write the **cube** root.

J. $125 = 5^3$ 1,000 = _____ 64 = _____ 27 = _____ 8 = _____ 216 = _____

K. 512 = _____ 1,728 = _____ 2,744 = _____ 343 = _____ 8,000 = _____ 6,859 = _____

Squares and Cubes

Look at the list of square roots and cube roots below. **WITHOUT USING A CALCULATOR**, place them along the number where you think they should go. Order from least to greatest.

$$\sqrt{25} \quad \sqrt[3]{20} \quad \sqrt[3]{10} \quad \sqrt{12} \quad \sqrt{30} \quad \sqrt[3]{100}$$

Least

Greatest

Now, **EVALUATE** the square roots and cube roots. Use a calculator where needed.

Correctly place them along the number along below, least to greatest.

$$\sqrt{25} = \quad \sqrt[3]{20} = \quad \sqrt[3]{10} = \quad \sqrt{12} = \quad \sqrt{30} = \quad \sqrt[3]{100} =$$

Least

Greatest

How close was your initial estimation?

Perfect Cubes BINGO

On the blank grid below, randomly place the perfect cubes from 8 to 1728 (2^3 to 12^3). Fill in all the squares → that means some numbers will be used more than once. You get to decide which ones to use more than once and where they go!

In a small group or with a partner, collect two dice and roll them. Add the number on each dice together, then find the cube of that number. (For example, if you rolled a 2 and a 5, $2 + 5 = 7$, and $7^3 = 343$.) Shade in the square on your BINGO grid that has 343. REPEAT until someone has a BINGO!

		FREE		