

Cube Roots:

A. Working with cube roots is very similar to [working with square roots](#).

1. By looking at the last number, we can determine the last digit of the answer.

If the last number ends in:

- 0 -> the last digit ends in 0.
- 1 -> the last digit ends in 1.
- 2 -> the last digit ends in 8.
- 3 -> the last digit ends in 7.
- 4 -> the last digit ends in 4.
- 5 -> the last digit ends in 5.
- 6 -> the last digit ends in 6.
- 7 -> the last digit ends in 3.
- 8 -> the last digit ends in 2.
- 9 -> the last digit ends in 9.

2. Once the last digit is determined, write it down and mentally chop off the last 3 digits under the cube root.
3. Using your knowledge of [cubes](#), find what numbers the remaining are between. Write the smallest of these numbers.

Ex [1] $\sqrt[3]{373248} = \underline{\hspace{2cm}}$.

- a. We know the last digit ends in a 2. Write 2.
- b. Chopping off the last 3 numbers we are left with 373.
- c. We know that $7^3 = 343$ and $8^3 = 512$, so the first digit is 7. Write 7.
- d. The answer is 72.

Ex [2] $\sqrt[3]{1601613} = \underline{\hspace{2cm}}$.

- a. We know that the last digit is 7. Write 7.
- b. Chopping off the last 3 digits we are left with 1601.
- c. We know that $11^3 = 1331$ and $12^3 = 1728$, so the first digits are 11.
Write 11.
- d. The answer is 117.