

# Rational Roots

When you're doing math -- especially in Algebra, you'll want to be able to know some important exponents off the top of your head.

$1 = \underline{\quad\quad\quad}$        $49 = \underline{\quad\quad\quad}$        $169 = \underline{\quad\quad\quad}$

$4 = \underline{\quad\quad\quad}$        $64 = \underline{\quad\quad\quad}$        $196 = \underline{\quad\quad\quad}$

$9 = \underline{\quad\quad\quad}$        $81 = \underline{\quad\quad\quad}$        $225 = \underline{\quad\quad\quad}$

$16 = \underline{\quad\quad\quad}$        $100 = \underline{\quad\quad\quad}$        $256 = \underline{\quad\quad\quad}$

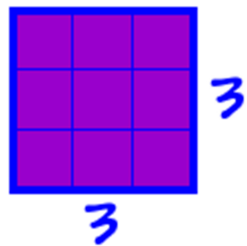
$25 = \underline{\quad\quad\quad}$        $121 = \underline{\quad\quad\quad}$        $289 = \underline{\quad\quad\quad}$

$36 = \underline{\quad\quad\quad}$        $144 = \underline{\quad\quad\quad}$        $324 = \underline{\quad\quad\quad}$

These are from your times tables... So, you should already know them.

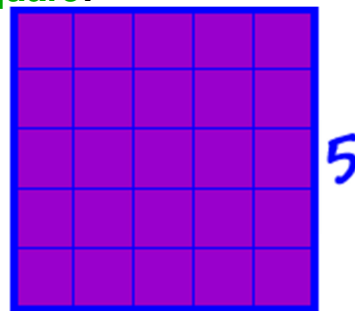
Why are they called "Rational Roots"?

Because they are the area and sides of a **square!**



area:

$3^2 = 9$



area:

$5^2 = 25$

# Cube Roots

$1 = \underline{\quad}$

$27 = \underline{\quad}$

$125 = \underline{\quad}$

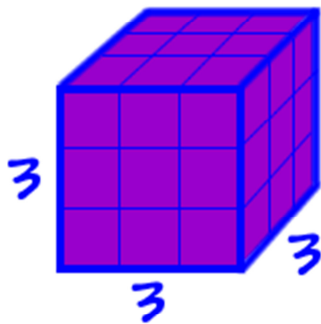
$8 = \underline{\quad}$

$64 = \underline{\quad}$

$216 = \underline{\quad}$

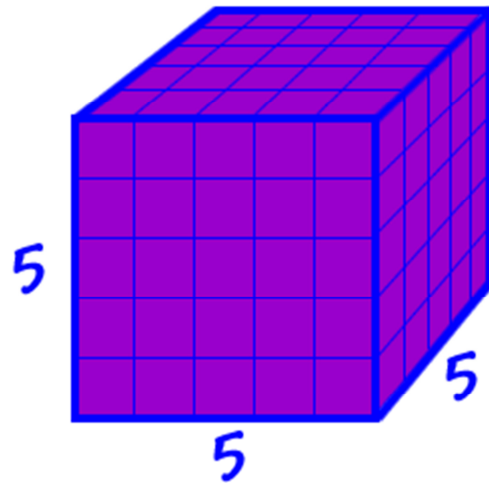
I'll bet you can guess why these are called "cubes!"

Yep, they are the volumes and sides of **cubes**!



volume:

$3^3 = 27$



volume:

$5^3 = 125$