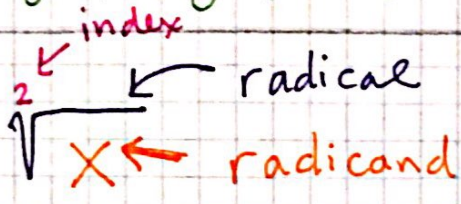


Date: Day 5 / Day 6, 1.2.1) How can I describe a graph? Investigating Square root graphs.

Radical = $\sqrt{\quad}$
 Radicand = what's under the $\sqrt{\quad}$



$$\sqrt[2]{X^1} = X^{\frac{1}{2}}$$

$$X^{\frac{1}{3}} = \sqrt[3]{X^1}$$

$$X^{\frac{1}{4}} = \sqrt[4]{X^1}$$

$$X^{\frac{3}{4}} = \sqrt[4]{X^3}$$

Perfect Squares

$$(2)^2 = (2)(2) = 4$$

$$(-3)^2 = (-3)(-3) = 9$$

List of perfect squares:

- 0, 1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 196, 225, 256

$\sqrt{-4}$ = no solution!
 but $\sqrt{-4}$ for Algebra 1...
 for Algebra 2!

$$\sqrt{-1} \quad \sqrt{4}$$

$$\downarrow \quad \downarrow$$

$$i \quad 2 = 2i$$

imaginary #

$$\sqrt{12}$$

$$\downarrow \quad \downarrow$$

$$\sqrt{3} \quad \sqrt{4}$$

$$\downarrow \quad \downarrow$$

$$\sqrt{3} \quad 2 \Rightarrow 2\sqrt{3}$$

i = imaginary unit

$$i^2 = -1 \text{ and } \sqrt{-1} = i$$

$\sqrt{-1}$ \heartsuit math!
 $i \heartsuit$ math!

$\sqrt{-1}$ $2^3 \Sigma \uparrow \uparrow$!
 i 8 sum pi!
 (I ate some pie! \smile)

* i is defined as the number whose square is equal to -1 .