

evaluate

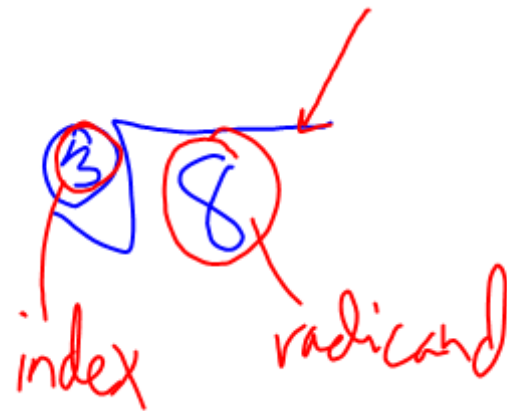
$$\sqrt{36}$$

$$\sqrt{(6)^2}$$

$$(6)$$

radicals

$$\frac{2}{3}$$



$$\sqrt{25} = \sqrt{(5)^2}$$

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

$$\sqrt[3]{(5)^3} = 5$$

$$\sqrt[3]{-125} = \sqrt[3]{(-5)^3} = -5$$

$$\sqrt{-4} = \sqrt{(\quad)^2} \text{ not real}$$

$$\sqrt[5]{-32} = \sqrt[5]{(-2)^5} = -2$$

$$\sqrt[4]{81} = \sqrt[4]{(3)^4} = 3$$

$$\sqrt[6]{-64} = \sqrt[6]{(\quad)^6} \quad \text{not real}$$

$$\sqrt[3]{(-5)^3} = -5$$

$$\sqrt[3]{-125}$$

*

$$\sqrt{\text{even } X} \neq -\#$$

$$\sqrt[4]{(-2)^4} = \sqrt[4]{+16} = \sqrt[2^4]{+16} = |-2| = 2$$

$$\sqrt{4} = +2$$

$$\sqrt{-4} = \text{not real } \oplus 2i$$

$$\sqrt{x^2} = |x|$$

$$x = 2$$

$$\sqrt{2^2} = 2$$

$$x = -2$$

$$\sqrt{(-2)^2} = |-2| = 2$$

$$\sqrt[2]{X^2} = |X|$$

$$\textcircled{12} \sqrt{X^{12}} = |X|$$

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

$$\sqrt[4]{X^8}$$

$$\sqrt[4]{X^4} = |X|$$

$$\sqrt[4]{(X^2)^4} = \textcircled{X^2}$$

$$\sqrt[5]{X^5} = X$$

$$\textcircled{3} \sqrt[3]{X^{12}}$$

$$\sqrt[3]{(X^4)^3}$$

$$\rightarrow X^4$$

$$\sqrt{16} = +4$$

$$\sqrt{-16} = \textcircled{+}4i$$

not

$$+\sqrt{0} = -0$$

$$\textcircled{4} \sqrt[4]{X^{12}}$$

$$\rightarrow \sqrt[4]{(X^3)^4}$$

$$\rightarrow |X^3|$$

Simplify

$$\sqrt[5]{-32x^{10}}$$

$$\cancel{\sqrt[5]{(-2x^2)^5}}$$

$$-2x^2$$

$$\sqrt[4]{y^{20}}$$

$$\sqrt[4]{(y^5)^4}$$

$$|y^5|$$

Simplify

$$\textcircled{2} \sqrt{X^2 + 10X + 25}$$

$$\cancel{2} \sqrt{(X+5)^2}$$

$$|X+5|$$

$$\sqrt{(9+16)} = \sqrt{\cancel{9+16}}$$

$$\sqrt{25} = \cancel{3+4}$$

$$5 \neq 7$$

$$\sqrt[4]{81}$$

$$\sqrt[4]{(3)^4}$$

$$(3)$$

$$\ominus \sqrt[4]{81}$$

$$(-3)$$

$$\sqrt[4]{-81}$$

$$\text{not real}$$

$$\sqrt[6]{(-2)^6} = |-2| = (2)$$

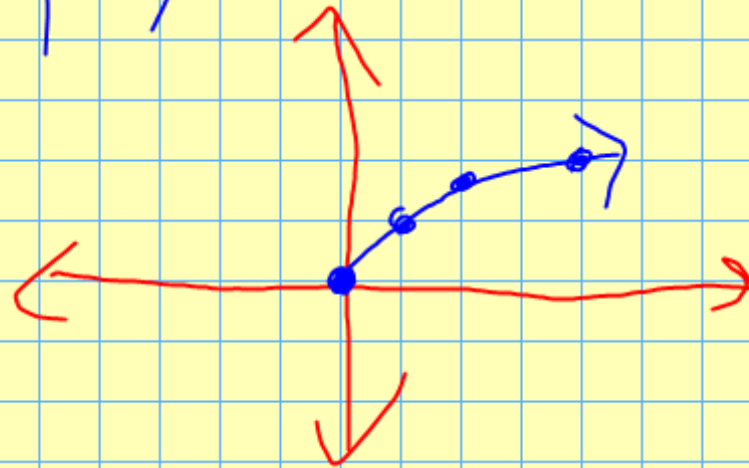
$$\sqrt[6]{x^6} = |x|$$

graphing $y = \sqrt{x}$

Domain $[0, \infty)$

Range $[0, \infty)$

X	y
0	0
2	1.4
4	2



$$y = \sqrt{x+2}$$

Domain

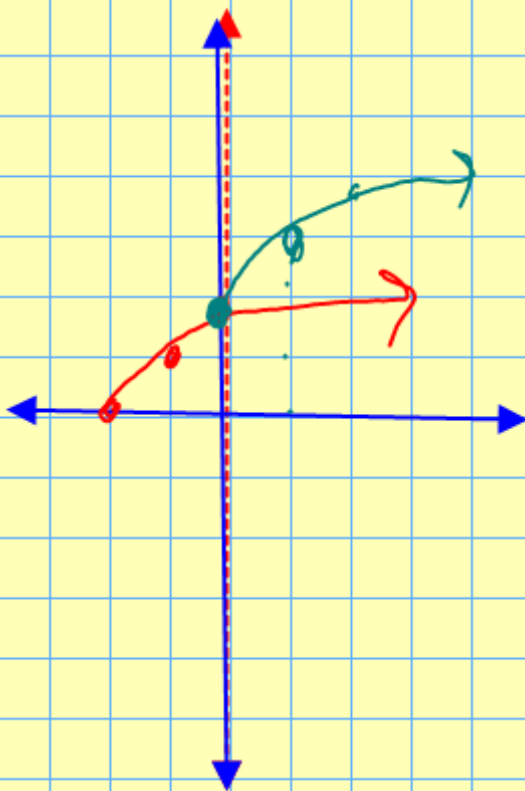
$$y = \sqrt{x} + 2$$

Domain $[0, \infty)$

$$x+2 \geq 0$$

$$x \geq -2$$

x	y
-2	0
-1	1
0	1.4



x	y
0	2
1	3
2	3.4

① $y = \sqrt{3-2x}$

find the domain

Solve $\rightarrow 3-2x \geq 0$
 $\frac{-2x}{-2} \geq \frac{-3}{-2}$

$x \leq \frac{3}{2}$
 $(-\infty, \frac{3}{2}]$



②

$\sqrt[6]{x^{12} y^{30} z^{18}}$

$\sqrt[6]{(x^2 y^5 z^3)^6}$

$x^2 y^5 z^3$

$$+\sqrt{4} = \textcircled{+2}$$

$$-\sqrt{4} = \textcircled{-2}$$

$$\textcircled{2} \times = 4$$

$$10 \div 2$$

$$2 \times \boxed{5} = 10$$

$$\begin{array}{r} 24 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 28 \\ \times 11 \\ \hline \end{array}$$

$$\sqrt{2.0060}$$

$$\begin{array}{r} -1 \\ \hline \end{array}$$

$$100$$

$$-96$$

$$400$$