

I can: Add and Subtract Radicals

2.3

Starter:

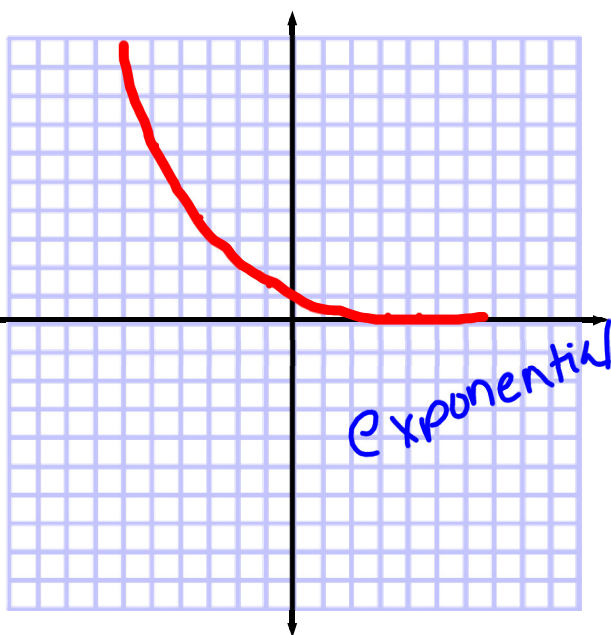
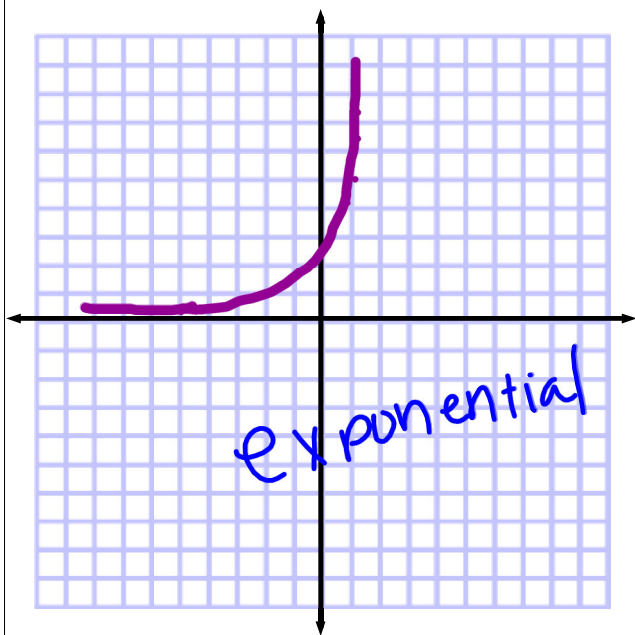
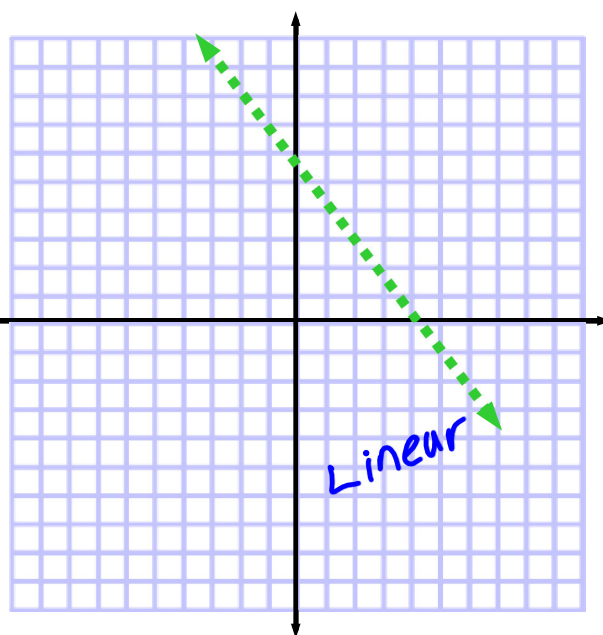
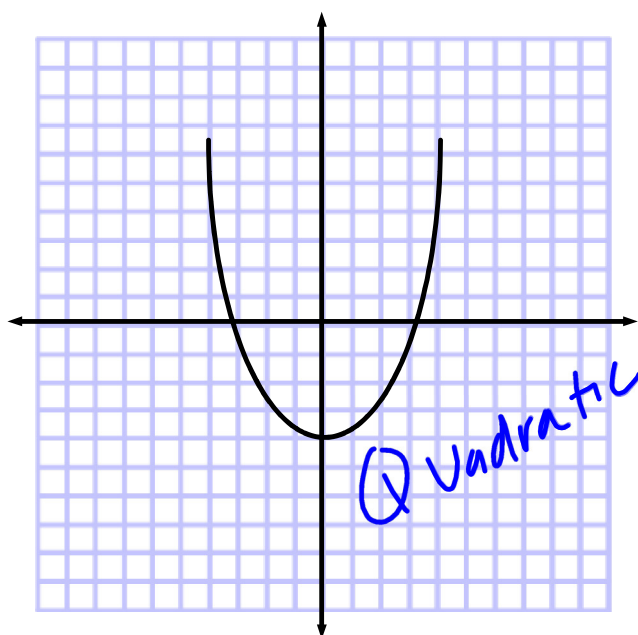
Simplify

1. $-3\sqrt{24x^3}$

2. $\sqrt[3]{108x^5y^8}$

Calendar Math

Determine if the following is a linear, quadratic, or exponential function



Let practice simplifying first

Handwritten work showing the simplification of several radicals:

- $\sqrt{32} = 4\sqrt{2}$ (with a tree diagram for 32: 32 = 4 * 8 = 4 * 4 * 2)
- $\sqrt{50} = 5\sqrt{2}$ (with a tree diagram for 50: 50 = 5 * 10 = 5 * 2 * 5)
- $\sqrt{20} = 2\sqrt{5}$ (with a tree diagram for 20: 20 = 5 * 4 = 5 * 2 * 2)
- $\sqrt{45} = 3\sqrt{5}$ (with a tree diagram for 45: 45 = 5 * 9 = 5 * 3 * 3)
- $\sqrt{24} = 2\sqrt{6}$ (with a tree diagram for 24: 24 = 6 * 4 = 3 * 2 * 2 * 2)

you can only combine like terms (terms with the same radical number)

$$3x + 2x = 5x$$

3x + 2x

1. $-\sqrt{27} - 2\sqrt{3}$

9 (3)
~~27~~ (3)

$$-3\sqrt{3} - 2\sqrt{3} = \boxed{-5\sqrt{3}}$$

$$3. \quad \underline{2}\sqrt{24} + 3\sqrt{54}$$

$$4\sqrt{6} + 9\sqrt{6} = \boxed{13\sqrt{6}}$$

$$7. \quad 2\sqrt{5} - \sqrt{27} - 2\sqrt{3}$$

$$\begin{array}{c} \nearrow \textcircled{3} \\ \textcircled{3} \\ \textcircled{3} \\ 2\sqrt{5} - 3\sqrt{3} - 2\sqrt{3} \end{array}$$

$$\boxed{2\sqrt{5} - 5\sqrt{3}}$$

$$15. -3\sqrt{24} + 2\sqrt{24} + -\sqrt{5} + 2\sqrt{24}$$

$$\sqrt{24} - \sqrt{5}$$

$$\begin{array}{l} \sqrt{4 \cdot 6} - \sqrt{5} \\ \sqrt{4} \sqrt{6} - \sqrt{5} \\ 2\sqrt{6} - \sqrt{5} \end{array}$$

20. $\frac{b^{1/2}}{b^{-2}}$

$$b^{5/2}$$

BW $\frac{1}{2} - \frac{-2 \cdot 2}{1 \cdot 2}$
 $\frac{1 + 4}{2} = \frac{5}{2}$

$$\sqrt{b^5} = b^2 \sqrt{b}$$

Solve for x

$$(x-2)(x+2)=0$$

Find the zeros

$$y = (x-2)(x+2)$$

Find the roots

