

Calendar Math Quiz

Exponent Properties Quiz

New Calendar Math

2.3 Add and Subtract Radicals

**Objective:** Demonstrate understanding of adding and subtracting radicals.

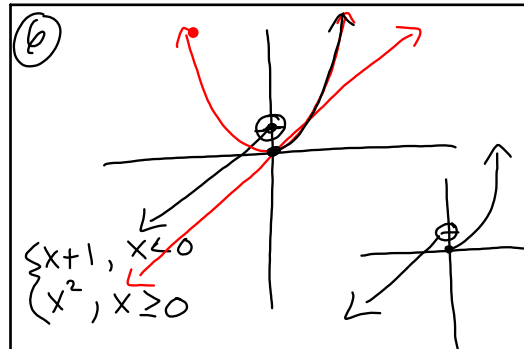
Sep 22-3:43 PM

11 left 4

Sep 23-8:47 AM

12  $y = \sqrt{x}$   
 $y = -\frac{5}{4}\sqrt{x} + 9$   
 |a|  
 $|\frac{-5}{4}| = \frac{5}{4}$

Sep 23-8:47 AM



Sep 23-8:50 AM

Homework ?'s

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	$x^2$	$x$	$-3$
$3x$	$3x^3$	$3x^2$	$-9x$
$8$	$8x^2$	$8x$	$-24$

$3x^3 + 8x^2 + 3x^2 - 9x - 24 + 8x$   
 $3x^3 + 11x^2 - x - 24$

Sep 19-11:10 AM

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$(4x+10) + (-5x+20)$   
 $-x + 30$   
 $(4x+10) - (-5x+20)$   
 $4x+10 + 5x - 20$   
 $9x - 10$

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(23)  $x^2 - 3x - 18$

$\begin{array}{r} -18 \\ -6 \quad 3 \\ -3 \end{array}$   $(x-6)(x+3)$

$x-6=0 \quad x=6$   
 $x+3=0 \quad x=-3$

$\{6, -3\}$

Sep 23-9:12 AM

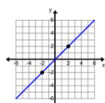
(17)  $-2\sqrt{147x^2y^3}$


$-2 \cdot 7 \cdot x \cdot y \sqrt{3y}$

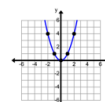
$-14xy\sqrt{3y}$

Sep 23-9:13 AM

Calendar Math

Linear Function: 

Exponential Function: 

Quadratic Function: 

Which of these three functions grows the fastest?

Sep 19-11:16 AM

2.3 Add and Subtract Radicals

To add or subtract radicals:

1. Simplify - break down radical
2. Combine like terms • same index

• same thing on inside radical

$\sqrt{x} + \sqrt{x}$

Properties of Radicals		
$\sqrt[n]{a^n} = a$	$\sqrt[n]{ab} = \sqrt[n]{a} \cdot \sqrt[n]{b}$	$\sqrt[n]{\frac{a}{b}} = \frac{\sqrt[n]{a}}{\sqrt[n]{b}}$

$a^n = a^1 = a$   
 $\sqrt[3]{a^3} = a^{3/3} = a^1 = a$

$\sqrt{xy} = \sqrt{x} \cdot \sqrt{y}$

$\sqrt{\frac{x}{y}} = \frac{\sqrt{x}}{\sqrt{y}}$

Sep 19-11:19 AM

Simplifying Radicals:

Radicals that are simplified have:

- No fractions left under the radical.
- No perfect power factors in the radicand = number on the inside
- No exponents in the radicand, greater than the index, n.

Simplify the expressions below by adding or subtracting:

Ex 1)  $-\sqrt{27} - 2\sqrt{3}$

$-\sqrt{3 \cdot 9} - 2\sqrt{3}$   
 $-3\sqrt{3} - 2\sqrt{3} = -5\sqrt{3}$

Ex 2)  $3\sqrt{12} + 2\sqrt{27} - 3\sqrt{27}$

$3\sqrt{4 \cdot 3} + 2\sqrt{9 \cdot 3} - 3\sqrt{9 \cdot 3}$   
 $6\sqrt{3} + 6\sqrt{3} - 9\sqrt{3}$   
 $12\sqrt{3} - 9\sqrt{3} = 3\sqrt{3}$

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Ex 3)  $2\sqrt[3]{24} - 2\sqrt[3]{4} + 2\sqrt[3]{61}$

$2\sqrt[3]{8 \cdot 3} - 2\sqrt[3]{2 \cdot 2} + 2\sqrt[3]{61}$   
 $2 \cdot 2\sqrt[3]{3} - 2\sqrt[3]{4} + 2\sqrt[3]{61}$   
 $4\sqrt[3]{3} - 2\sqrt[3]{4} + 2\sqrt[3]{61}$

Ex 4)  $-3\sqrt{24} - 2\sqrt{5} + 3\sqrt{-6}$

$-3\sqrt{4 \cdot 6} - 2\sqrt{5} + 3\sqrt{-1 \cdot 6}$   
 $-6\sqrt{6} - 2\sqrt{5} + 3\sqrt{-6}$   
 $-6\sqrt{6} + 3\sqrt{-6} - 2\sqrt{5}$   
 $-3\sqrt{6} - 2\sqrt{5}$

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ex 4  $-3\sqrt{24} - 2\sqrt{5} + 3\sqrt[3]{-6}$

$\begin{array}{c} \wedge \\ 8 \ 3 \\ \wedge \\ 4 \ 2 \\ \textcircled{2 \ 2} \end{array}$

$\begin{array}{c} \sqrt{-1} \\ \text{---} \\ \text{---} \end{array}$

$\begin{array}{c} \wedge \\ 2 \ 3 \end{array}$

$-3 \cdot 2\sqrt{2 \cdot 3}$   
 $\textcircled{-6\sqrt{6}}$

$\textcircled{-6\sqrt{6} - 2\sqrt{5} + 3\sqrt[3]{-6}}$

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16  $3\sqrt{6} - 2\sqrt{5} + 2\sqrt{20} - \sqrt{20}$

$3\sqrt{6} - 2\sqrt{5} + \sqrt{20}$

X-X=0

$\begin{array}{c} \wedge \\ 4 \ 5 \\ \textcircled{2 \ 2} \end{array}$

$3\sqrt{6} - 2\sqrt{5} + 2\sqrt{5}$

$3\sqrt{6} + 0$

$\textcircled{3\sqrt{6}}$

Sep 21-10:08 AM