

March 3, 2015  
 \* Quiz #6 - Friday  
 • 3.4 Word Problems  
 • 13.1 Systems

Mar 3-10:48 AM

13.1  
 #32)

$$\begin{cases} y = 3x \\ 4y - 12x = 8 \end{cases}$$

*Substitute*

*or*

$$\begin{cases} -3x + y = 0 \\ -12x + 4y = 8 \end{cases}$$

*now in S.F.*

Mar 3-11:00 AM

3.4 Elimination  
 #3)

$$\begin{cases} 3(x - 2y = 5) \\ -3x + 6y = 4 \end{cases}$$

$$\begin{cases} 3x - 6y = 15 \\ -3x + 6y = 4 \end{cases}$$


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$$0 + 0 = 19$$

$$0 \neq 19$$

*No Solution!*

- Parallel Lines

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①  $x - 2y = 5$

$$-2y = -x + 5$$

$$y = \frac{1}{2}x - \frac{5}{2}$$

*m*      *b*

②  $-3x + 6y = 4$

$$6y = 3x + 4$$

$$y = \frac{3}{6}x + \frac{4}{6}$$

$$y = \frac{1}{2}x + \frac{2}{3}$$

*m*      *b*

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<u>No Solution</u>	<u>Infinite Solutions</u>
<ul style="list-style-type: none"> <li>• Parallel Lines</li> </ul> $0 \neq 19$ $5 \neq -8$	<ul style="list-style-type: none"> <li>• Same Line</li> </ul> $0 = 0$ $5 = 5$ $-2 = -2$

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3.4 Elimination  
 #8)

$$\begin{cases} 5x + 3y = 4 \\ 3(2x - y = 5) \end{cases}$$

$$\begin{cases} 5x + 3y = 4 \\ 6x - 3y = 15 \end{cases}$$


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$$11x = 19$$

$$x = \frac{19}{11}$$

$$5\left(\frac{19}{11}\right) + 3y = 4$$

$$\frac{95}{11} + 3y = 4$$

$$\left(\frac{19}{11}, -\frac{17}{11}\right)$$

$$3y = \frac{4}{3} - \frac{95}{11}$$

$$3y = \frac{44 - 95}{33}$$

$$3y = -\frac{51}{33}$$

$$y = -\frac{17}{11}$$

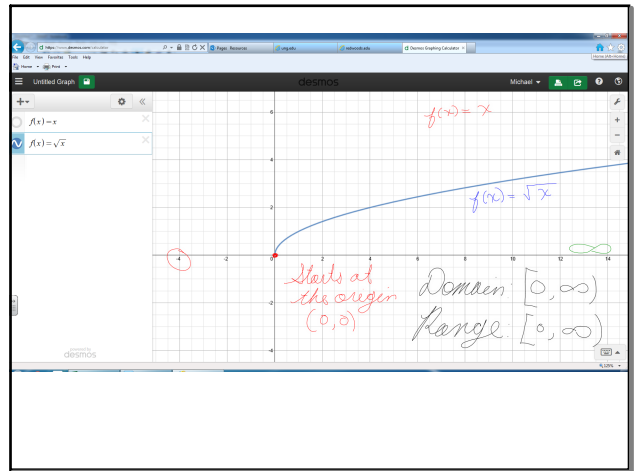
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# Radical Functions

Index of the Radical  $n$  Radical Symbol  $\sqrt[n]{a}$  Radicand

$f(x) = \sqrt{x}$  Parent Square Root Function

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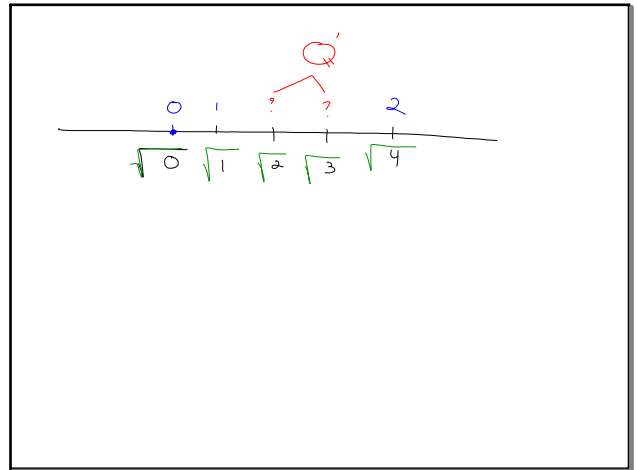


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### Square Root Radicals

$\sqrt{0} = 0; (0)^2 = 0 \cdot 0 = 0$   
 $\sqrt{1} = 1; (1)^2 = 1 \cdot 1 = 1$   
 $\sqrt{2} = \text{Q}; (?)^2 = 2$   
 $\sqrt{3} = \text{Q}$   
 $\sqrt{4} = 2; (2)^2 = 4$   
 $\sqrt{5} = \text{Q}$   
 $\sqrt{6} =$   
 $\sqrt{7} =$   
 $\sqrt{8} =$   
 $\sqrt{9} = 3; (3)^2 = 9$   
 $\vdots$   
 $\sqrt{16} = 4; (4)^2 = 16$

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$x^1$	$x^2$
0	0
1	1
2	4
3	9
4	16
5	25
6	36
7	49
8	64
9	81
10	100

Perfect Square Root

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### Perfect Variable Square Roots

$\sqrt{x^2}$

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