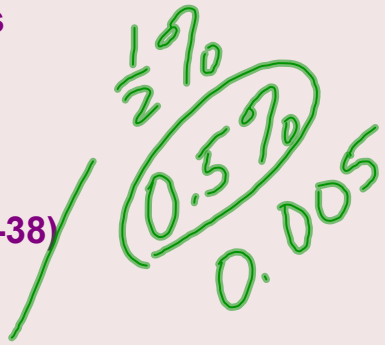
Pre-Algebra

Agenda:
- Fractions-Decimals-Percents

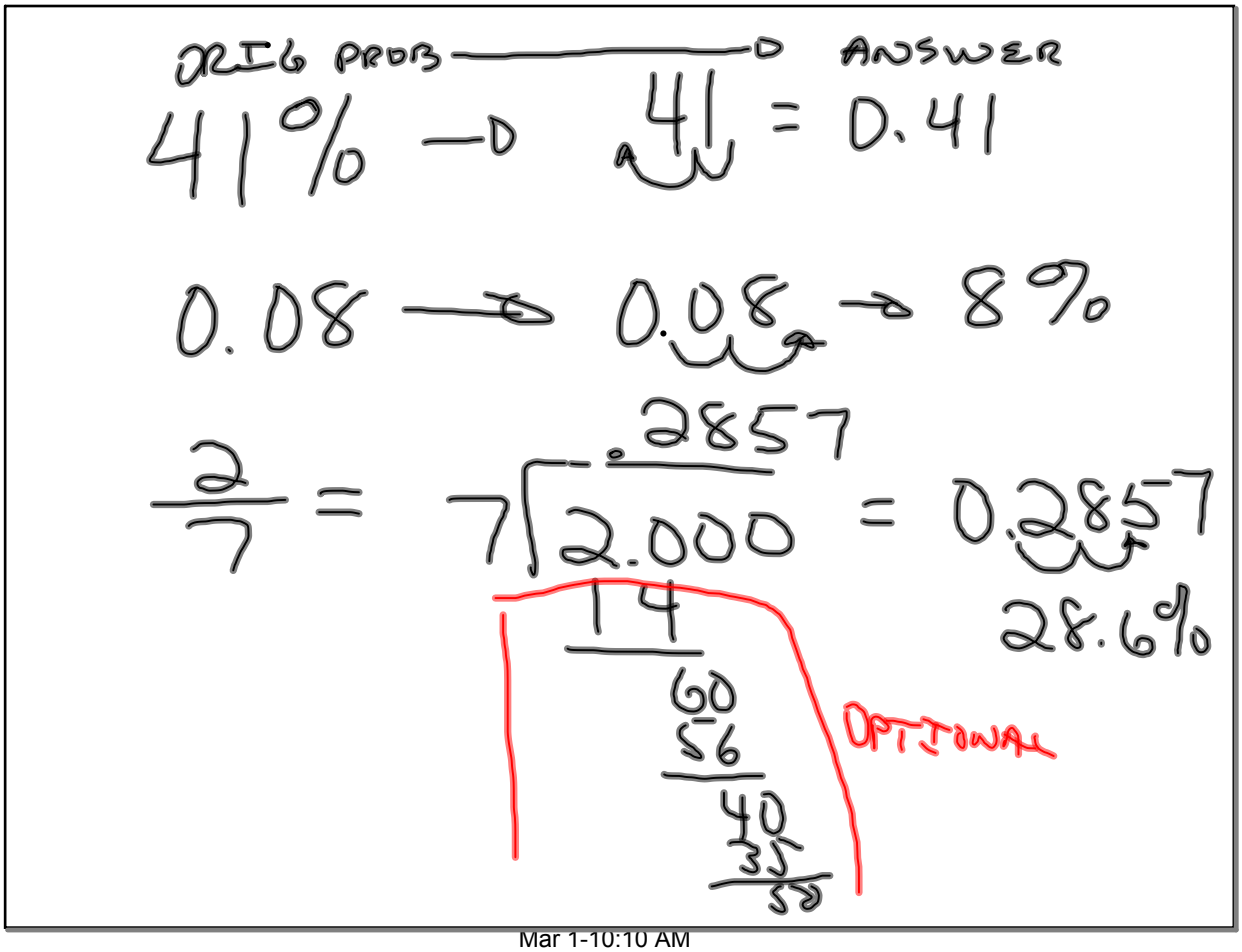


To Do Now:
- Complete Warm Up
- Homework on your desk (Page 340 #1-38)

Warm Up:
The rate of interest paid on savings accounts at a bank increased by ½%. Express this value written as a decimal.

Homework:
- Complete M&M Project (this is the only assign. for A-Block)
- Redo last night's homework showing ALL steps
- 7-2 Word Problems sheet, showing ALL work on a separate sheet

Nov 4-10:28 AM



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Fractions-Decimals-Percents

5%		
	0.9	
		3/5
	$0.\overline{45}$	
7.5%		
		1 4/7

Feb 16-7:39 AM

Fractions-Decimals-Percents

5%		
	0.9	
		3/5
	$0.\overline{45}$	
7.5%		
		1 4/7

Feb 16-7:39 AM

CONVERTING FROM FRACTIONS TO DECIMALS TO PERCENTS

Percent to fraction: Put the percent over 100 and reduce.
Percent to decimal: Divide by 100 or move the decimal two places to the left.
Decimal to fraction: Number to the left of the decimal is the whole number. Number to the right of the decimal is numerator. Place value of the last digit on the right is the denominator.
Decimal to percent: Move the decimal two places to right. (Multiply by 100)
Fraction to decimal: Divide bottom (denominator) into numerator.
Fraction to percent: Proportion $\frac{fraction}{fraction} = \frac{x}{100}$

Converting chart

Intro to-Algebra

Agenda:
- **Solving by Substitution**

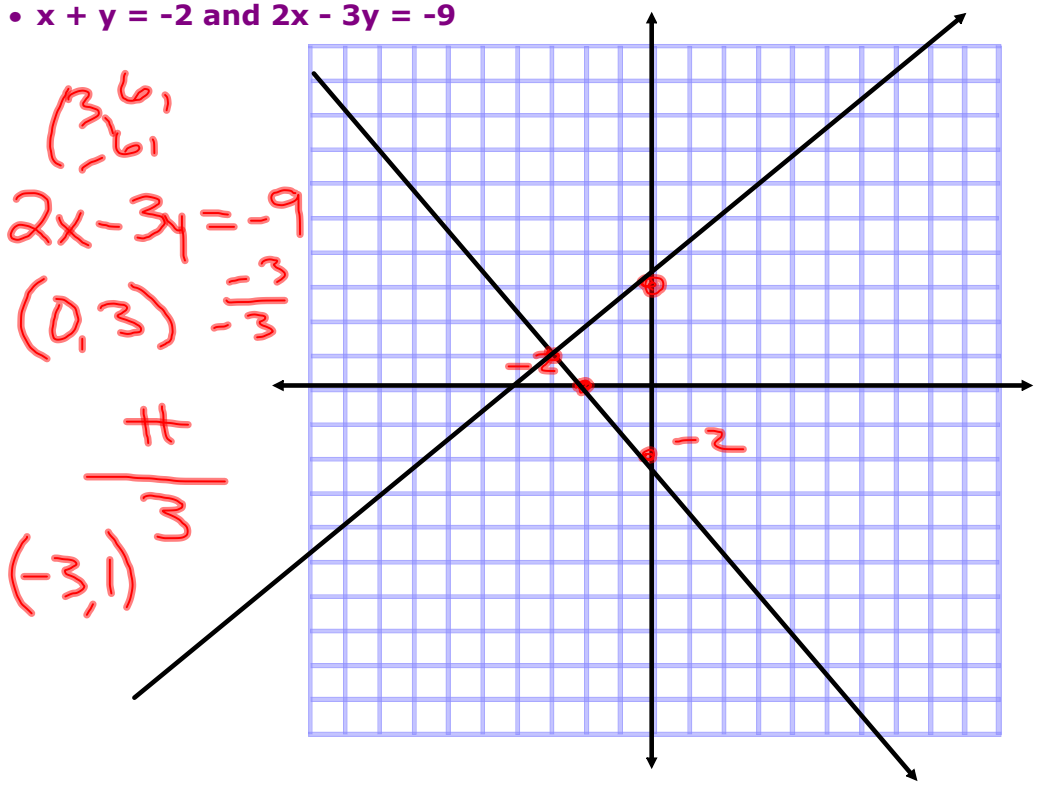
To Do Now:
- **Have your homework on your desk (x + y = -2 and 2x - 3y = -9)**
- **Complete Warm Up**

Warm Up:
- **Determine the *number* of intersection points for the graphs of y = ½x – 3 and x – 2y = 6. Explain your answer**

Homework:
- **Page 408 #1-13**

Nov 4-10:28 AM

- x + y = -2 and 2x - 3y = -9

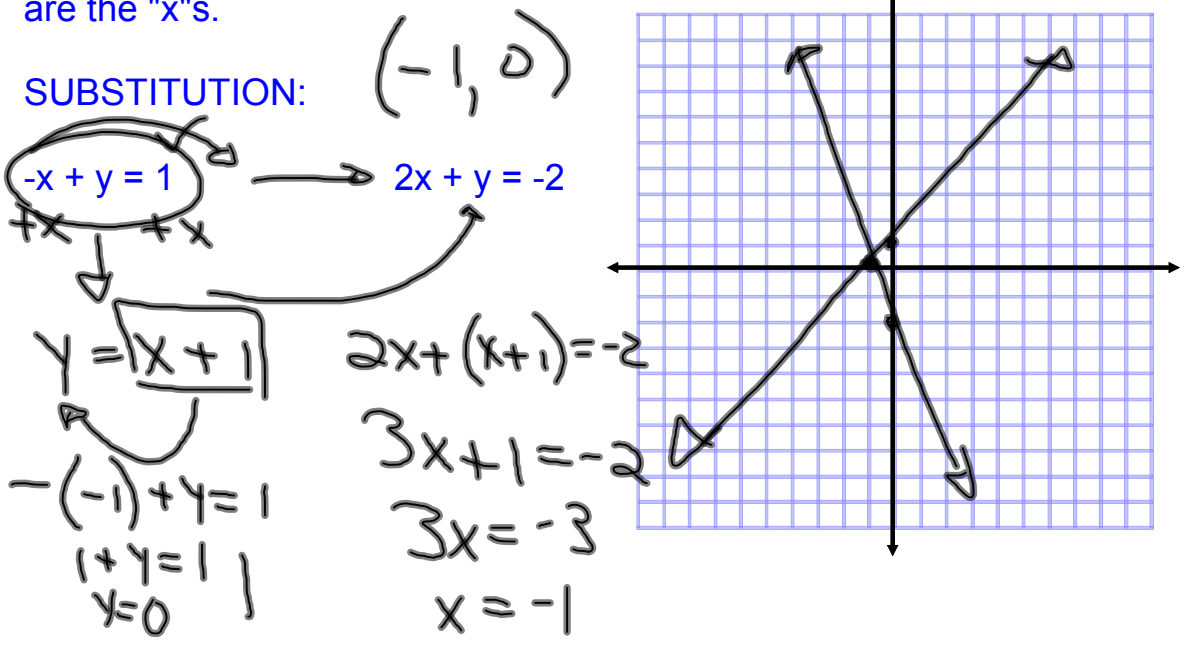


Mar 1-8:19 AM

Solving by Substitution

Given: Points of Intersection for a system are ordered pairs that are *solutions* to the equations. Therefore, the x-value and y-value for the solution are shared at that particular point by the equations. That is, the "y" of one of the equations is the same "y" on the other equation, as are the "x"s.

SUBSTITUTION:



Feb 17-8:49 AM

Steps for Substitution

NOTE: You can not solve equations with two different variables! Consequently, your goal is to eliminate one of the variables. Then you can always solve for the remaining ***one.***

1. Solve one of the equations for one of the variables.

2. Substitute the expression from Step 1 into the other equation and solve for the remaining variable.

3. Substitute the value from Step 2 into either equation from the original problem and solve for the remaining variable.

4. Check the solution in each of the equations.

Feb 28-1:37 PM

Example.

$3x + y = 5$ $2x - y = 10$

1. Solve one of the equations for one of the variables.

$y = -3x + 5$ $y = 2x - 10$

$2x - (-3x + 5) = 10$

2. Substitute the expression from Step 1 into the other equation and solve for the remaining variable.

$2x + 3x - 5 = 10$

$5x = 15$

$x = 3$

$3(3) + y = 5$

3. Substitute the value from Step 2 into either equation from the original problem and solve for the remaining variable.

$y = -4$

4. Check the solution in each of the equations.

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$\frac{1}{3}x - \frac{1}{4}y = 1$ $4x - 3y = 12$

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

$2x = y - 4$

$(2x + 4 = y)$

$4x - 3(2x+4) = 12$

$4x - 6x - 12 = 12$

$-2x = 24$

$x = -12$

$2(-12) + 4 = y$

$-24 + 4 = y$

$y = -20$

Mar 1-9:03 AM

Advanced Algebra

Agenda:

- Radicals-Simplifying and Solving

To Do Now:

- Complete Warm Up

Warm Up:

- Which of the following are Irrational?

$\sqrt{1024}, \sqrt{0.0256}, \sqrt{0.09}, \sqrt{\frac{72}{8}}$

32 0.16 0.3

Homework:

- Page 528 #2 - 44 Evens

$\frac{\sqrt{72}}{\sqrt{8}}$

32 34 36 38

$\frac{\sqrt{36}\sqrt{2}}{\sqrt{4}\sqrt{2}}$

$\frac{6\sqrt{2}}{2\sqrt{2}}$

3

$\sqrt{900} = 30$

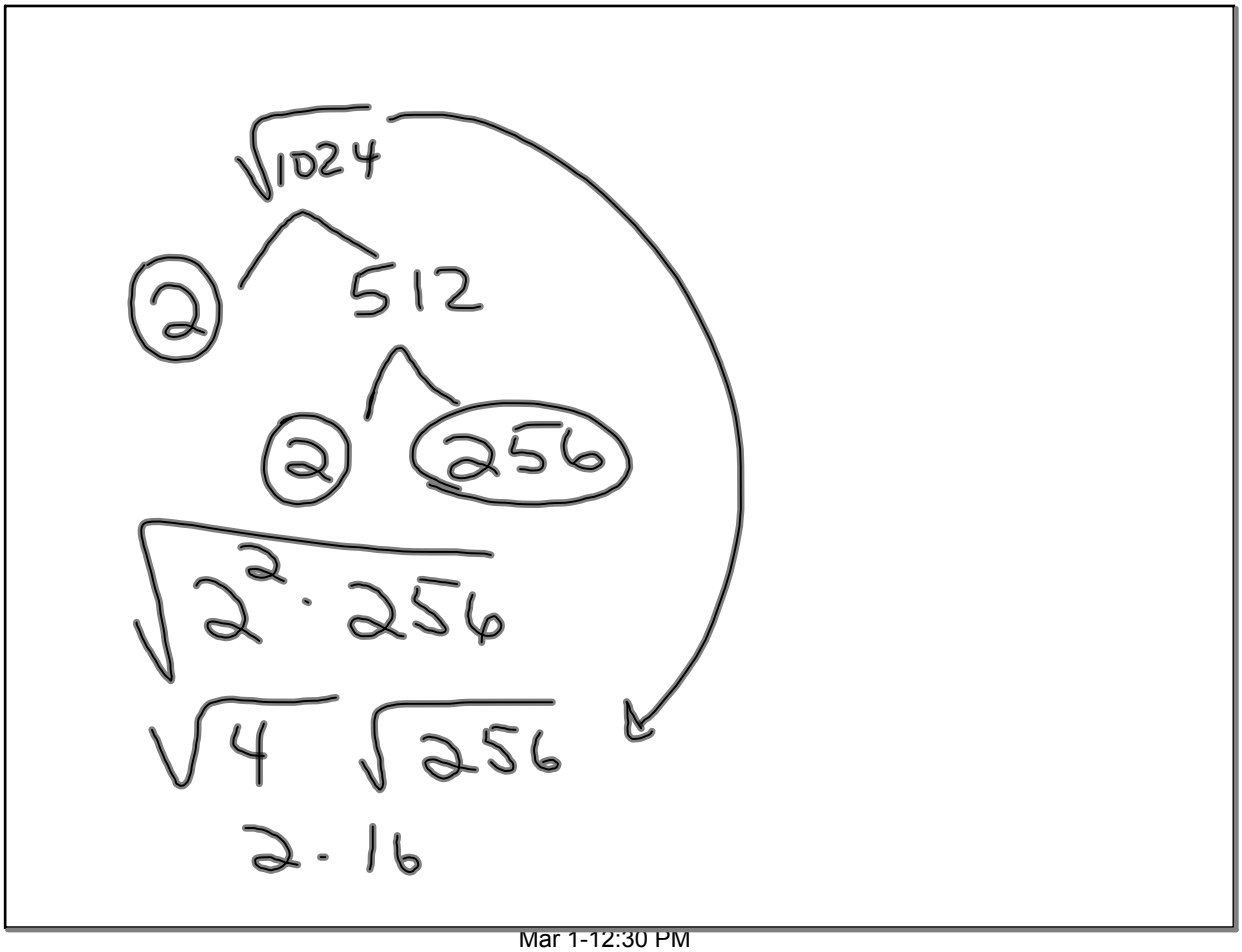
$\sqrt{1024}$

$\sqrt{1600} = 40$

$\sqrt{9}$

3

Nov 4-10:28 AM



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Estimating Square Roots-Interpolating

IRRATIONAL:

CAN NOT BE EXPRESSED AS $\frac{A}{B}$ WHERE A, B ARE INTEGERS & $B \neq 0$.

(OR... IS A NON-REPEATING NON-TERMINATING FRACTION)

MOST SQUARE ROOTS ARE IRRATIONAL.

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$\sqrt{4} = 2$

$\sqrt{8} = 2.8$ OR $2\frac{4}{5}$

$\sqrt{9} = 3$

$\sqrt{8} = 2.828427125\ldots$

$\sqrt{16} = 4$

$\sqrt{20} = 4.$

$\sqrt{25} = 5$

$4\frac{4}{9} = 4.\overline{4}$

$\sqrt{20} = 4.472135955\ldots$

Mar 1-12:40 PM

SIMPLIFY:

$\sqrt{20}$

$\sqrt{4}\ \sqrt{5}$

PERFECT SQUARE

NON PERFECT SQUARE

$2\sqrt{5}$

$\sqrt{32}$

$\sqrt{4}\ \sqrt{8}$

$2\sqrt{8}$

$2\sqrt{4}\sqrt{2}$

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

$\sqrt{16}\sqrt{2}$

$4\sqrt{2}$

Feb 28-1:49 PM

$\sqrt{48x^3}$

$\sqrt{16}\ \sqrt{3}\ \sqrt{x^2}\ \sqrt{x}$

$4\sqrt{3}(x)(\sqrt{x})$

PERFECT SQUARES

NON-PERFECT SQUARES

$4x\sqrt{3x}$

EVEN EXPONENTS ARE PERFECT SQUARES:

$\sqrt{x^{16}} = x^8$

$\sqrt{y^{10}} = y^5$

$\sqrt{y^{25}} = \sqrt{y^{24}}\sqrt{y}$

$y^{12}\sqrt{y}$

Mar 1-12:48 PM

$4\sqrt{2} + 3\sqrt{2}$

$\sqrt{2}(4+3)$

$7\sqrt{2}$

$7\sqrt{4}$

$4x + 3x$

$x(4+3)$

$7x$

$4x + 3x$

$7x^2$

Mar 1-12:53 PM

$\sqrt{75} + \sqrt{48}$

$5\sqrt{3} + \sqrt{16}\sqrt{3}$

$5\sqrt{3} + 4\sqrt{3}$

$\sqrt{3}(5+4)$

$9\sqrt{3}$

Mar 1-12:56 PM

$\sqrt{108} - \sqrt{12} + \sqrt{27}$

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

$7\sqrt{3}$

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