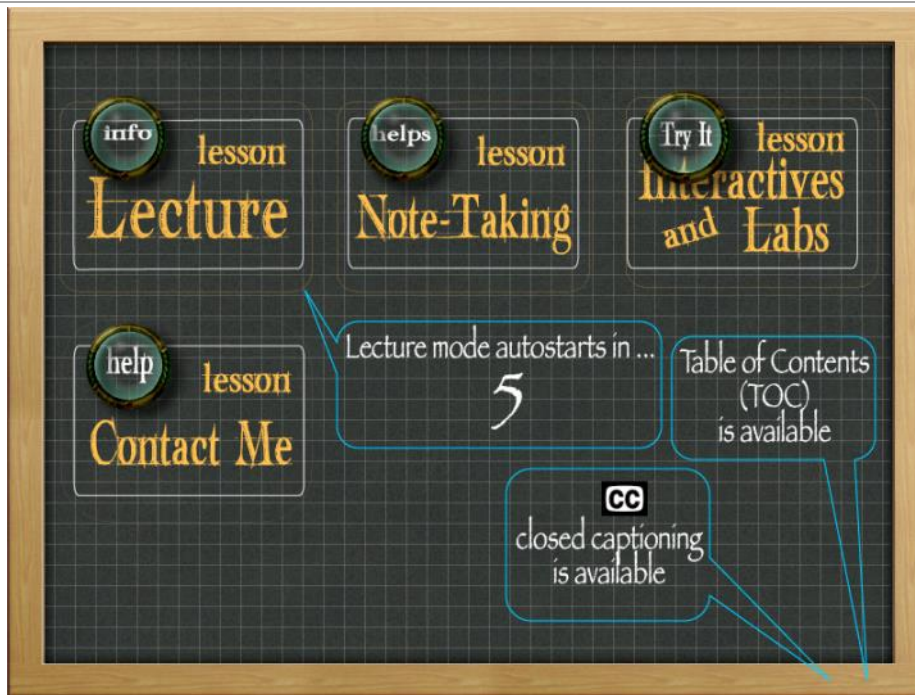


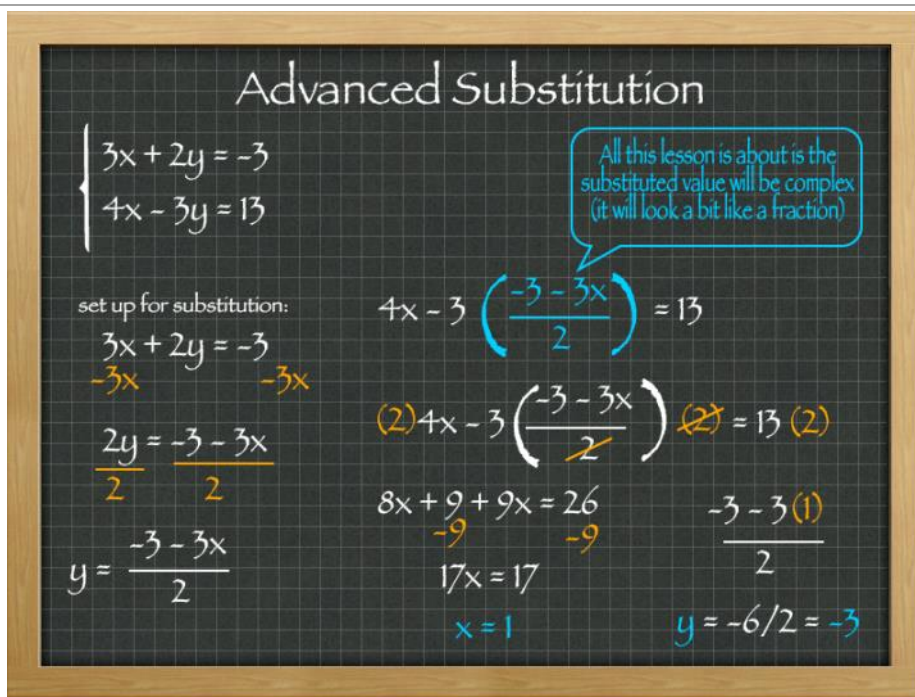
Advanced Substitution

Thursday, January 19, 2012
5:36 PM

Slides



Notes



All this lesson is about is the substituted values will be complex. Those are the ones that resemble fractions but with a variable in a numerator or denominator.

Let's skip on by the parts you know quite well, such as rearranging an equation to prepare it for substitution, and pick up right where the complex fraction appears.

We want to get rid of the 2 in the denominator so that the complex fraction can be eliminated. We will multiply 2 to each term.

That will give us a much simpler equation. Now we will move the 9 away from the side with the variable x. Then solve for x. $x=1$.

Now we will plug that 1 in for the x into one of the equations and solve for the y and we are done.

Try It

$$\begin{cases} 5x - 3y = 9 \\ 2x - 4y = -2 \end{cases}$$

Next

$$5x - 3y = 9$$

$$\quad -3y - 3y$$

$$\frac{5x}{5} = \frac{9+3y}{5}$$

$$x = \left(\frac{9+3y}{5}\right)$$

$$2\left(\frac{9+3y}{5}\right) - 4y = -2$$

$$2\left(\frac{9+3y}{5}\right) - 4y(5) = -2(5)$$

$$2(9+3y) - 20y = -10$$

$$18 + 6y - 20y = -10$$

$$\quad -18 \quad -18$$

$$-14y = -28$$

$$y = 2$$

$$5x - 3(2) = 9$$

$$5x - 6 = 9$$

$$\quad \quad 6 \quad 6$$

$$5x = 15$$

$$x = 3$$

Congratulations!
You have completed
this topic

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this lesson if you wish...

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