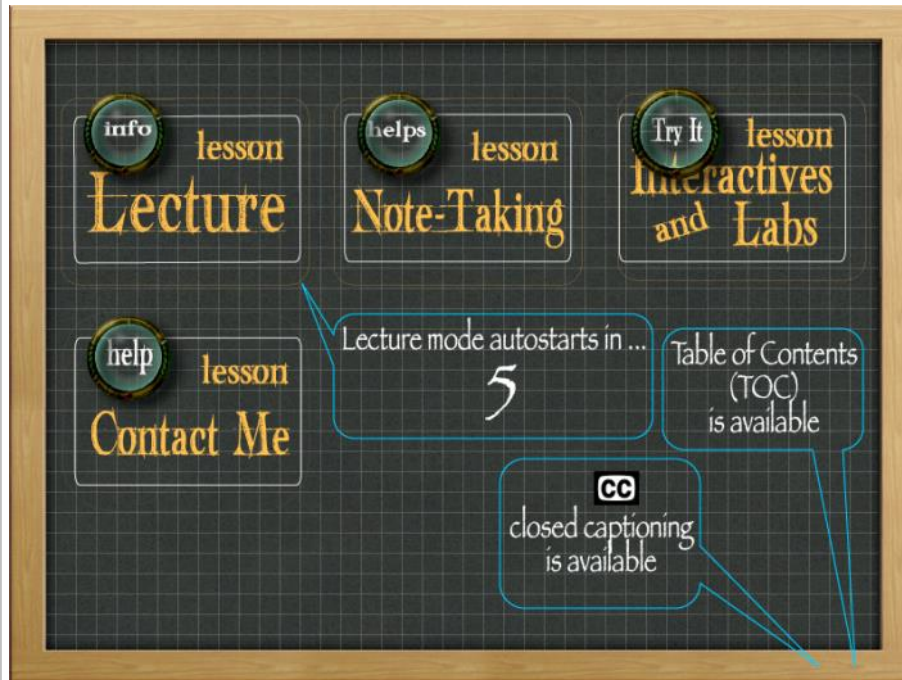


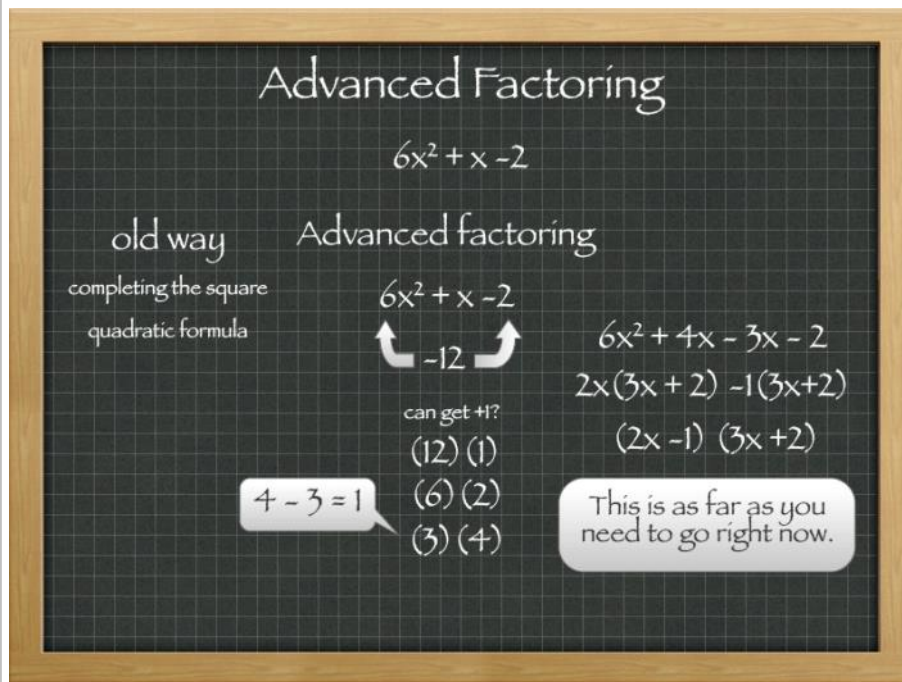
Advanced Factoring

Thursday, January 19, 2012
5:36 PM

Slides



Notes



In this lesson you will start learning advanced factoring.

So far, you have learned to factor quadratic equations by completing the square or use the quadratic formula. This method will put yet one more tool in your tool belt to solve these.

The way these are done is to multiply the x^2 coefficient to the constant. Here we get -12.

Now we will start thinking up number combinations that give you a negative 12 but will also give you the 1 that is with the x . Here, the negative sign can be on either number, so we will check each number with and without the negative sign mentally to see if we can get the 1.

12 and 1 can be multiplied to get 12, but there isn't a way to add the numbers with varying signs to get 1. We will keep on trying combinations. Three and four looks promising. If the 4 is positive and the 3 is negative that would give a 1.

We will plug those two numbers in as a replacement for $1x$. We will pull a common factor out of the first two and then out of the

last two and see if we end up with the same terms in the parentheses. If we don't, try reversing the positions of the two values for x and try again.

Here we have $3x + 2$ in both. Now we will rewrite it so that we have two.

This is as far as you need to go right now.

Try It

$6x^2 - 11x + 4$

$6x^2 - 11x + 4$

24

(1) (24)
(2) (12)
(3) (8)

$6x^2 - 8x - 3x + 4$

$2x(3x - 4) - 1(3x - 4)$

$(2x - 1)(3x - 4)$

$-8 - 3 = -11$

Congratulations!
You have completed
this topic

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this lesson if you wish...

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