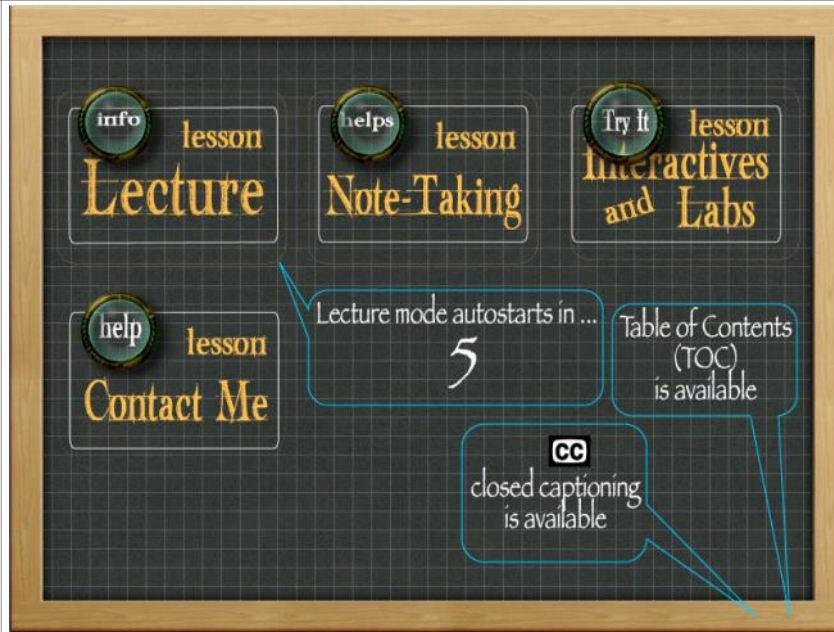


Sum and Difference of Two Cubes

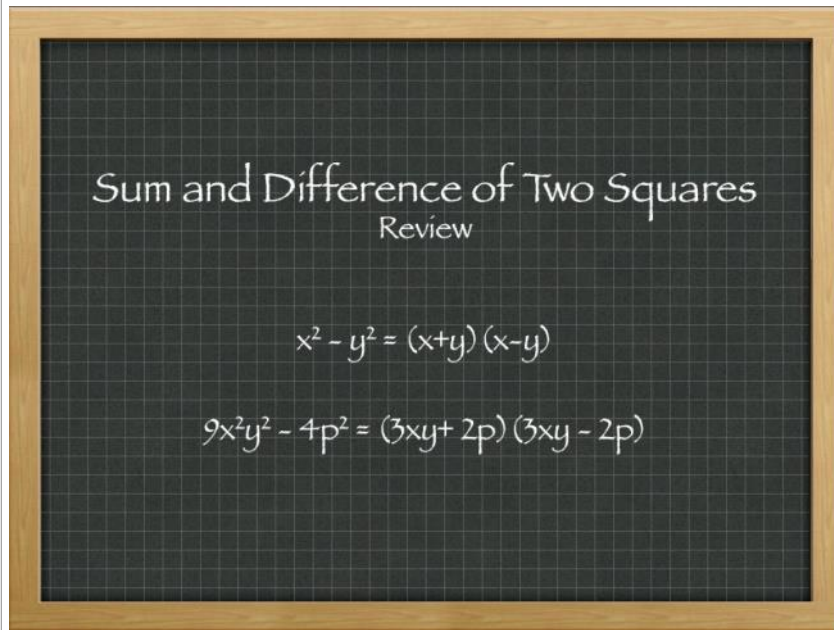
Thursday, January 19, 2012

5:44 PM

Slides



Notes



Reviewing the sum and difference of two squares can be helpful to the new topic. In that past lesson, you were taught to be alert to when you had a sum or difference of two squares by looking at the format of the squares. If the first and second term were squares and it was subtraction, then you could write out the memorized form using whatever variables that problem was using.

Sum and Difference of Two Cubes

$$a^3b^3 - c^3$$
$$(ab - c)(a^2b^2 + abc + c^2)$$

With the sum and difference of two cubes it is the same way. You must learn to be aware of when your problem is written in this form. The variables may change, but you will see the first term's two variables being cubed, there being a negative sign in the middle associated with yet another variable that is cubed.

When you see it, you will know that the final factored form will be like this ...

The first group will be almost the same as the original but without the cubed superscripts. Then you will have the first term but raised to the second power added to one of each term and then added to the last variable squared. It is a little more work to memorize than the sum and difference of two squares, but it still isn't too bad. Work now to memorize the format of what you are to be alert to and how to re-write it in the factored form. When you feel you have it memorized, click next.

$$x^3y^3 - p^3$$
$$(xy - p)(x^2y^2 + xyp + p^2)$$

Try It

Congratulations!
You have completed
this topic

Give us feedback about
this lesson if you wish...

