

Daily Agenda

Learning Target:  
I can use the different techniques to correctly factor a polynomial.

Homework  
Worksheet #1-18

The secret of getting ahead is getting started.  
-Mark Twain

Nov 15-8:24 PM

Factoring Techniques

GCF

$$2a^2 - 5a^3b$$

$$a^2(2 - 5ab)$$

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Factoring Techniques

Difference of Squares

$$a^2 - b^2 = (a+b)(a-b)$$

|                         |   |
|-------------------------|---|
| $y^2 - 36$ $(y+6)(y-6)$ | $2x^2 - 32$ $2(x^2 - 16)$ $2(x-4)(x+4)$ |
|-------------------------|---|

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Factoring Techniques

Sum/Difference of Cubes

$$a^3 - b^3 = (a-b)(a^2 + ab + b^2)$$

$$a^3 + b^3 = (a+b)(a^2 - ab + b^2)$$

|  |  |
|--|--|
| $3x^3 + 81$ $3(x^3 + 27)$ $3(x+3)(x^2 - 3x + 9)$ | $x^6 - 64$ $(x^3 + 8)(x^3 - 8)$ $(x+2)(x^2 - 2x + 4)(x-2)(x^2 - 2x + 4)$ |
|--|--|

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Factoring Techniques

Guess/Check

|                  |                    |
|------------------|--------------------|
| $m^2 - 10m + 25$ | $6v^3 - 7v^2 - 5v$ |
|------------------|--------------------|

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Factoring Techniques

More Examples

|                   |                   |
|-------------------|-------------------|
| $6x^2 + 29x + 35$ | $12x^2 - 16x + 5$ |
|-------------------|-------------------|

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## Factoring Techniques

## Grouping

$$\underline{2x^3-x^2+6x-3}$$

$$x^2(2x-1) + 3(2x-1)$$

$$(2x-1)(x^2+3)$$

$$\underline{4x^3-x^2-8x+2}$$

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

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

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