Date: _____

Learning Goal

This is how we factor!

Explain, in words, how to factor

$$y = x^2 + 7x + 12$$

Special Cases

Factoring $y = x^2 + bx + c$ when $b = 0$

Factor

$$y = x^2 - 81$$

This is called a _____

_____

Special Cases

Factoring $y = x^2 + bx + c$
when both factors are the same!

Factor

$$y = x^2 + 6x + 9$$

This is called a _____

_____

Common Factoring

Factoring $y = x^2 + bx + c$ when $c = 0$

Factor

$$y = x^2 + 5x$$

Our first step is to _____

_____

Find what both terms have _____

Our common factor in this case is _____

We must _____ both terms by the common factor.

Common Factoring

Factoring $y = x^2 + bx + c$ when $c = 0$

Factor

$$y = 2x^2 + 8x$$

The greatest common factor is _____

Common Factoring

Factoring $y = x^2 + bx + c$ when $c = 0$

Factor

$$y = -3x^2 + 12x$$

The greatest common factor is _____

Common Factoring

Determine the greatest common factor for each.

a) $x^2 + 9x$

b) $x^2 - 6x$

c) $3x^2 + 12x$

d) $2x^2 + 10x$

e) $-5x^2 - 20x$

f) $-4x^2 + 8x$

g) $-x^2 + 4x$

h) $3x^2 - 15x$

i) $2x^2 - 30x$