## On your whiteboard...

Rewrite each quadratic expression in standard form and classify the product by the number of terms.

$$4x(x+7)$$

product of a monomial and binomial

$$4x(x+7)$$

$$4x(x+7)$$

$$4x(x+7)$$
binomial

$$4(x+1)(x+7)$$

product of a monomial and two binomials

$$4(x+1)(x+7)$$

$$4(x^2+7x+x+7)$$

$$4(x^2+8x+7)$$

$$4(x^2+32x+28)$$
trinomial

$$4(x+7)(x-7)$$

product of a monomial and two binomials

$$4(x+7)(x-7)$$

$$4(x^{2}-7x+7x-49)$$

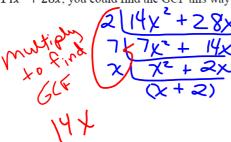
$$4(x^{2}-49)$$

## Partner Practice: Factoring out the GCF

**<u>Distributing</u>** is the process of multiplying a term in front of parenthesis to each term inside the parenthesis. For example, 14x(x+2) becomes 14x(x) + 14x(2) when you distribute the 14x to each of the terms in the parenthesis. Then simplifying gives you  $14x^2 + 28x$ . Doing this process in reverse is called **factoring**.

When you factor a polynomial, you are trying to find the quantities that you multiply together in order to create the polynomial. The **greatest common factor** (GCF) for a polynomial is the largest monomial that is a factor of (divides) each term of the polynomial. Note: The GCF must be a factor of **EVERY** term in the polynomial.

The hardest part of factoring out a GCF is determining what the greatest common factor of each term in the polynomial is. To factor  $14x^2 + 28x$ , you could find the GCF this way...







Factor the GCF from the polynomials below.		
7 49x2-63x 2 7x2-9x 7x-9	3)+8x²-36x+9 16x²-12x+3	2 4x - 10 ax - 5
35x(7x-9)	[5(16x2-12x+3)	2(X+7)(2x-5)