

Name: _____

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Date: _____

8A Period _____

Factoring Using the GCF

Simplify the expression: $5(c + d) =$ _____

What property was used to simplify the above expression? _____

*When we undo the distributive property we are also factoring using the GCF!

Steps: To factor polynomials using the GCF:

1) _____

2) _____

3) _____

Examples: Factor the following polynomials

1) $2a + 2b =$ _____

2) $8x - 16 =$ _____

GCF = _____

GCF = _____

3) $2y^2 + 5y =$ _____

4) $10p^2 - 15p^3 =$ _____

GCF = _____

GCF = _____

5) $\pi r^2 + \pi r h =$ _____

6) $35a^2b - 25ab^2 =$ _____

7) $12m^3 + 6m^2 - 3m =$ _____

GCF = _____

GCF = _____

GCF = _____

We have just seen how to identify the greatest common factor of two monomials. We now would like to use this skill to write binomials and trinomials in factored form. First, though, we will review the distributive property.

Exercise #8: Rewrite each of the following without parentheses by applying the distributive property.

(a) $5(2x+3)=$

(b) $2x(x-6)=$

(c) $5(x^2-4x+7)=$

We now will reverse this process by “factoring out” the GCF from binomials and trinomials.

Exercise #9: Write each of the following expressions as equivalent products of their GCF’s and another factor.

(a) $3x+6=$

(b) $2x^2+8x=$

(c) $4x^2-8x+6=$

(d) $10x^2-25x=$

(e) $6x+27=$

(f) $5x^3+10x^2+5x=$

(g) $2x^2+10x+20=$

(h) $x^2-x=$

(i) $3x+3=$

(j) $4x^2-10x=$

(k) $8x^2-4x+16=$

(l) $10x^3y^2+15x^2y^4-5x^2y^2=$