

Date: \_\_\_\_\_

### 3.4 Common Factors

**Greatest Common Factor (GCF):**

Largest Factor shared by two or more terms. (Careful not to confuse with LCM)

**Ex.** State the GCF of 12 & 28**Ex.** Determine the GCF of each pair of terms:

a)  $16x^2y$  and  $24x^2y^3$

b)  $5m^2n$  and  $15mn^2$

c)  $48ab^3c$  and  $36a^2b^2c^2$

Recall distribution:  $2x(3x^2 - 4) =$ 

GCF Factoring is the reverse process:

**To factor means to write as a product.****Ex.** Write each polynomial in factored form.

a)  $16r^2 - 20r$

c)  $27r^2s^2 - 18r^3s^2 - 36rs^3$

b)  $4x^3y^2 - 14x^2$

d)  $12n^5p^4 + 8n^4p^3 - 4n^3p^2$

Recall double distribution:  $(x - 3)(2x + y) =$

Step 1

Step 2

We can reverse step 1 by factoring a binomial factor:

**Ex.** Factor each polynomial.

a)  $3x(x - 4) + 5(x - 4)$

b)  $4(x + 5) - 3x(x + 5)$

We can reverse step 2 by group factoring:

**Ex.** Factor each polynomial.

a)  $y^2 + 8xy + 2y + 16x$

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

Practice: pg. 220/ 4 – 7, 10 – 14, 16