

Objective: to factor polynomials.

Warm-up: Classify the following by number of **terms**.

A.) $5x$

B.) $3x^2 - 3x + 1$

C.) $5x - 10$

Factoring a GCF

Example 1: Please factor the following by using the greatest common factor. State “prime” where appropriate.

a. $2x - 8$

b. $-2x - 8$

c. $2x^2 - xy$

d. $40x^4 - 20x^2 - 10x$

e. $3z^2 - 6z + 9z^2$

f. $z^2 - z^5 + 9z^{21}$

g. $5z^2 - 6x + 9x^2$

h. $x^{10}y^8 - x^{12}y^6$

Challenge: Factor $15z^2y^2 - 10zy^5 + 25z^2y^3$

Review: Factor each of the following polynomials.

a. $n^2 - 11n + 10$

b. $x^2 + 4x - 12$

c. $b^2 + 16b + 64$

d. $k^2 - 4k + 24$

e. $5m^2 + 19m + 12$

f. $2n^2 + 5n + 2$

Difference of Squares: Factor each of the following polynomials.

g. $4m^2 - 25$

h. $a^2 - 9$

i. $16n^2 - 9$

j. $9x^2 - 1$