**SM 2**

**Date:** **Section:**

**Objective:**

***Factoring:***

***Greatest Common Factor (GCF):***

***Prime Polynomial:***

**Factoring Out a Common Factor:**

1.

2.

3.

4.

**Examples:** Factor the following expressions**.**

a) $x^2 + 3x$ b) $-2y + 6$ c) $4n^2 - 20$

d) $15d^2 + 20d^4$ e) $2z^3 + 2z$ f) $-6h^2 + 3h$

g) $-20m^3 + 24m^2 - 32m$ h) $2a^2b^3c^4 + 8a^4b^8c^7 - 6a^3bc^5$ i) $p(q-6) + 2(q-6)$

**Factoring by Grouping (4 Terms):**

1.

2.

3.

4.

**Examples:** Factor the following expressions.

a) $x^3 - 4x^2 + 3x - 12$

b) $mp + mq + np + nq$

c) $4y^3 + 2y^2 - 6y - 3$

d) $20h^3 - 16h^2 - 5h + 4$

e) $4v^3 - 14v^2 + 12v - 42$

f) $4a - 7ab - 12 + 21b$

g) $6q^3 + 2q^2r - 36q - 12r$

h) $15w^3z^2 - 20w^2z - 60wz + 80$