AC Method and Patterns

Name:_____

2. Pull out the common factor, then factor the following trinomials.

(A) $2x^2 + 10x + 8$ **(B)** $3x^2 - 3x - 18$ **(C)** $4x^2 - 16x - 20$

2. Factor the following trinomials

(A) $3x^2 + 16x + 5$ **(B)** $3x^2 + 8x + 5$ **(C)** $2x^2 + 7x + 3$

(D) $3x^2 - 2x - 5$ **(E)** $3x^2 - 14x - 5$ **(F)** $2x^2 - x - 3$

(G) $5x^2 + 11x + 2$ **(H)** $7x^2 + 10x + 3$ **(I)** $4x^2 + 12x + 5$

(J) $5x^2 - 9x - 2$ **(K)** $7x^2 - 4x - 3$ **(L)** $4x^2 - 4x - 15$

Math 024: Factoring Patterns

Name:

1. Factor the following perfect squares.

$$a^2x^2 + 2abx + b^2 = (ax + b)^2$$

(A) $9x^2 + 24x + 16$

(B) $4x^2 - 20x + 25$

(C) $25x^2 - 30x + 9$

2. Factor the following differences of squares.

$$a^2x^2 - b^2 = (ax - b)(ax + b)$$

(A) $9x^2 - 16$

(B) $25x^2 - 64$

(C) $36x^2 - 49y^2$

3. Factor the following sums and differences of cubes.

$$a^3x^3 - b^3 = (ax - b)(a^2x^2 + abx + b^2)$$
$$a^3x^3 + b^3 = (ax + b)(a^2x^2 - abx + b^2)$$

(A) $x^3 - 64$

(B) $125x^3 + 1$

(C) $8x^3 + 27$

(D) $x^3 + 8$

(E) $27x^3 - 1$

(F) $125x^3 - 8$

4. Solve the following mixed problems.

(A) $x^6 - 8y^3$

(B) $4x^2 + 6xy + 9y^2$

(C) $x^4 - 16$