

First name: _____ Last name: _____

Student ID: _____

Factoring II Homework

1. Factor.

(a) $2n^2 + 3n - 9$

(b) $5x^2 + 19x + 12$

(c) $7x^2 + 53x + 28$

(d) $9k^2 + 66k + 21$

(e) $15n^2 - 27n - 6$

(f) $5x^2 - 18x + 9$

(g) $4n^2 - 15n - 25$

(h) $4x^2 - 35x + 49$

(i) $6x^2 + 7x - 49$

(j) $16x^2 + 60x - 100$

(k) $6x^2 + 37x + 6$

(l) $-6x^2 - 25x - 25$

2. Expand. Do not use FOIL.

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

(b) $(x + a)(x - a)$

(c) $(2x + 3)(2x - 3)$

(d) $(3x - 1)(3x + 1)$

3. Factor completely.

(a) $x^2 - 9$

(b) $25x^2 - 1$

(c) $81 - 4y^2$

(d) $16t^2 - 49$

(e) $x^2 + 8x + 16$

(f) $a^2 - 1$

(g) $5x^2(m - n) - 7x(m - n)$

(h) $x^2 - 6x + 9$

(i) $4x^2 - 12x + 9$

(j) $x^2 + 22x + 121$

(k) $3x^2 - 48$

(l) $49x^2 + 14x + 1$

4. Factoring completely.

(a) $a(a-b) - a(a-b)^2$

(b) $50x^2 - 240x + 288$

(c) $-2x^2 + 6x + 56$

(d) $(x + 7)^2 - 3^2$

(e) $8x^2 - 18$

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

(g) $5a^2 + 7a + 2$

(h) $10x^2 + 7x - 6$

(i) $2x^2 + 9x + 9$

(j) $3x^2 - 16x + 5$

(k) $15 - x - 6x^2$

(l) $21x^3 - 19x^2 - 22x$