First name: _____ Last name: _____ Student ID: _____

Factoring I Homework

1. Factor.

(a) $3x - 6$

(b) $15x + 10y + 25$

(c) $4x - 4y + 8$

(d) $12x^2 - 6x + 9$

(e) $-5x^3 - 15x$

(f) $2x^6 - 4x^5 + 20x^4$

(g) $37x^4 - 259x^3 - 222x^2$

(h) $19x^3 - 38x$

(i) $3(a + b) - 5(a + b)$

(j) $9a(c - 2) + 4b(c - 2) + (c - 2)$

(k) $y^3 + y^2 + y + 1$

(l) $ax + ac - bx - bc$

(m) $4x^2 + 20x + 3yx + 15y$

(n) $x^3 + 2x^2 + 8x + 16$

(o) $xy - 4y + 3x - 12$

(p) $x^3 - x^2 - 9x + 9$

(q) $x^3 - 3x^2 - 9x + 27$

(r) $x^2y + xy^2 - 5x - 5y$

2. Factoring trinomials.

(a) $x^2 - 6x - 7$

(b) $x^2 + 7x + 10$

(c) $x^2 - 5x - 36$

(d) $x^2 + 4x + 4$

(e) $x^2 – 6x + 9$

(f) $x^2 – 2x + 1$

(g) $y^2 + 8y + 16$

(h) $n^2 + 4n − 12$

(i) $m^2 + 2m − 24$

(j) $k^2 − 13k + 40$

(k) $x^2 − 15x + 50$

(l) $m^2 + m – 90$

(m) $6v^2 + 66v + 60$

(n) 20) $5v^2 − 30v + 40$

(o) $2k^2 + 22k + 60$

(p) $2n^2 + 6n − 108$

(q) $7a^2 - 14a - 21$

(r) $3y^2 - 15y + 18$

(s) $x^4 - 15x^3 + 56x^2$

(t) $2a^3 + 8a^2 - 64a$

(u) $5x^4 - 10x^3 - 75x^2$