Name: _____ Date: _____

# MORE PRACTICE WITH COMPLETE FACTORING
## ALGEBRA 2 WITH TRIGONOMETRY CLASSWORK AND HOMEWORK

Factoring is a gateway skill that a student must master before progressing to further work in algebra. Today's lesson/homework is simply a skills based lesson emphasizing fluency with complete factoring. In each problem, students should completely factor each expression. They are organized in difficulty level.

1. (Easy) - Completely factor each of the following expressions.

(a) $x^2+8x+15$ (b) $x^2-6x-27$ (c) $x^2-12x+32$ (d) $x^2-36$

(e) $x^2+7x-8$ (f) $100-x^2$ (g) $3x^2+12x$ (h) $16x^2-1$

(i) $x^2-6x+9$ (j) $10x^2-15x$ (k) $x^2+3x-88$ (l) $x^2-4x+4$

(m) $x^2-14x+45$ (n) $24x^2-30x$ (o) $x^2+25x+100$ (p) $x^2-5x+6$

(q) $14x^2-21x$ (r) $x^2-15x+56$ (s) $1-x^2$ (t) $x^2-10x-24$

2. (Moderate) - Completely factor each of the following expressions.

(a) $2x^2 + 10x - 12$

(b) $3x^2 - 30x + 72$

(c) $4x^2 + 10x + 6$

(d) $3x^2 + 11x - 20$

(e) $10x^2 + 34x + 12$

(f) $2x^2 - 15x + 28$

(e) $72 - 50x^2$

(f) $7x^2 - 31x - 20$

(g) $3x^3 - 75x$

(h) $5x^2 - 36x + 7$

(i) $\frac{1}{4}x^2 - \frac{25}{9}$

(j) $3x^2 + 4x - 20$

3. (Difficult) - Completely factor each of the following expressions.

(a) $6x^2 + 13x + 5$

(b) $20x^2 + 7x - 6$

(c) $24x^2 - 2x - 2$

(d) $100 - 16x^2$

(e) $18x^2 + 41x - 10$

(f) $6x^2 + 57x + 90$

(g) $6x^2 - 23x + 15$

(h) $40x^2 - 65x - 30$

4. (Even More Difficult) - Completely factor each of the following expressions.

(a) $48x^3 + 154x^2 - 20x$

(b) $300x^2 - 310x - 120$

(c) $20x^4 - 166x^3 + 120x^2$

(d) $36x^2 + 43x + 12$

(e) $36x^2 + 82x - 20$

(f) $40x^2 - 188x - 60$