Factoring Practice: Even Problems (Sections III – XI) **Name: _____**

Section III: Factoring the Difference of Two Squares

1. $x^2 - 9$	2. $x^2 - 25$	3. $4x^2 - 25$	4. $a^2 - x^2$
5. $x^2 - 16y^2$	6. $-x^2 + 16$	7. $2x^2 - 8$	8. $4a^2 - 81b^2$
9. $a^2b - b^3$	10. $5x^2 - 45y^2$	11. $16x^4 - y^2$	

Section IV: Factoring Perfect Square Trinomials

1. $x^2 - 16x + 64$	2. $a^2 - 10a + 25$	3. $9x^2 - 6x + 1$	4. $n^2 - 14n + 49$
5. $4y^2 - 20y + 25$	6. $16 + 40x + 25x^2$	7. $49x^2 - 14x + 1$	8. $n^2 + 2n + 4$
9. $36x^2 + 84x + 49$	10. $4 - 12y + 9y^2$		

Section V: Special Factoring - Challenge

1. $9x^2 - 49$	2. $x^2y^2 - 9z^4$	3. $(1/9)x^2 - 16$	4. $y^6 - 100$
5. $y^8 - 81$	6. $a^2b^2 + 6ab + 9$	7. $4x^2 + 12xy + 9y^2$	8. $9a^2 - 24a + 16$
9. $5c + 20c^2 + 20c^3$	10. $(x-1)^2 - 10(x-1) + 25$		

Section VI: Factoring Trinomials: $x^2 + bx + c$

1. $c^2 + 5c + 6$	2. $x^2 - 10x + 16$	3. $x^2 - 14x + 24$	4. $y^2 + 21y + 54$
5. $x^2 - 8x + 15$	6. $x^2 - x - 6$	7. $b^2 + 7b - 18$	8. $c^2 - 4c - 12$
9. $y^2 + 4y - 21$	10. $x^2 - 3x - 40$	11. $x^2 - 13x + 36$	

Section VII: ...More Factoring Trinomials: $x^2 + bx + c$

1. $m^2 + 10m + 21$	2. $x^2 - 6x + 5$	3. $x^2 - 2x - 15$	4. $y^2 + 9y + 18$
5. $v^2 + 12v + 20$	6. $a^2 - 14ab + 24b^2$	7. $x^2 - 11xy - 60y^2$	8. $3x^2 + 21xy - 54y^2$
9. $x^2 + 8xy + 12y^2$	10. $a^2 - 11ab - 60b^2$		

Section VIII: Factoring Trinomials: $ax^2 + bx + c$

1. $3x^2 + 10x - 8$	2. $7a^2 - 11a + 4$	3. $4y^2 + 8y + 3$	4. $2x^2 + 13x + 15$
5. $6x^2 - 7x - 20$	6. $5n^2 + 2n + 7$	7. $12y^2 + 7y + 1$	8. $2x^2 + 7x + 6$
9. $15x^2 - 28x - 32$	10. $2y^2 - 3y - 20$		

Section IX: ...More Factoring Trinomials: $ax^2 + bx + c$

1. $5z^2 + 7z + 2$	2. $3z^2 + z - 2$	3. $8s^2 - 10st + 3t^2$	4. $28a^2 + 5ab - 12b^2$
5. $12x^2 + 17x + 6$	6. $56y^2 + 15y - 56$	7. $64x^2 + 32xy - 21y^2$	8. $18x^2 - 57x + 35$

Section X: Factoring: Putting It All Together

1. $2x^2 + 8x + 6$	2. $6x^2 - 26x - 20$	3. $5t^2 + 15t + 10$	4. $14x^2 + 7x - 21$
5. $18x + 12x^2 + 2x^3$	6. $3t^3 - 27t$	7. $10x^2 + 15x - 10$	8. $4x^4 - 4x^2$

1. $27x^2 - 36x + 12$	2. $6m^3 + 54m^2 - 6m$	3. $x^2y^4 - x^6$	4. $x^4 - 3x^2 - 4$
5. $81x^4 - 16y^4$	6. $(2a+3)^2 - (a-1)^2$	7. $x^2(x^2-4) + 4x(x^2-4) + 4(x^2-4)$	