

Name : _____ Date: _____ Period: _____

Factoring Polynomials Day 1

Factor the following **COMPLETELY**:

1. $x^2 - 81$

2. $-2x^2 - 10x + 100$

3. $x^2 - 11x + 18$

4. $-8x^4 + 2x^2$

5. $15x^2 - 225$

6. $x^2 - 2x - 35$

7. $8x^4 + 12x^2$

8. $3x^3 + 9x^2 - 54x$

9. $14x^2 - 224y^2$

10. $x^2 + 12x + 20$

11. $x^2 + 4$

12. $x^3 - 4x$

$$13. x^2 - 9x + 8$$

$$14. 9x^2 - 16y^2$$

$$15. x^2 - 4x$$

$$16. -x^2 + 12x - 32$$

$$17. 81x^2 - 16$$

$$18. 3x^2 + 15x - 18$$

Multiply mentally:

$$19. (x - 3)(x + 4)$$

$$20. (2x + 7)^2 \text{ Expand 1st}$$

$$21. (x + 8)(x - 9)$$

$$22. (x - 4)(x + 4)$$

$$23. (x + 5)^2 \text{ Expand 1st}$$

$$24. (x - 4)(x - 9)$$