Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_

**Assignment: Factoring Special Cases**

**Factor completely.**

1. $x^{2}-25$ 10. $x^{3}+8$

$3x^{2}-27y^{2}$

2. $25a^{2}-81$ 11. $x^{3}-27$

3. $25x^{2}+64$ 12. $8x^{3}+64$

4. $9x^{2}-16$  13. $216m^{3}-n^{3}$

5. $9x^{2}+169$ 14. $y^{3}-125$

6. $8x^{2}-288$ 15. $x^{6}+125y^{6}$



7. $18x^{4}-32y^{2}$ 16. $1000x^{3}-27y^{3}$

8. $162x^{6}-98$ 17. $x^{7}+27x$

9. $144a^{10}-49b^{6}$ 18. $16b^{5}+2b^{2}$

**Review:**

19. Simplify: $\left(4x^{2}-8xy+2y^{2}\right)-\left(9x^{2}-4xy-7y^{2}\right)$

 A. $-5x^{2}+4xy+9y^{2}$ C. $-5x^{2}-12xy+9y^{2}$

 B. $-5x^{2}-4xy+9y^{2}$ D. $-5x^{2}-4xy-5y^{2}$

20. Simplify: $6x^{3}y^{2}(4x^{4}-3xy)$

 F. $24x^{7}y^{2}-18x^{4}y^{3}$ H. $24x^{7}y-18x^{4}y^{3}$

 G. $10x^{7}y^{2}-9x^{4}y^{3}$ J. $24x^{7}y^{2}-18x^{3}y^{3}$