**Assignment: Greatest Common Factor**

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

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

**Factor by finding the greatest common factor.**

1. $24x^{2}-8x$ 9. $x^{3}+3x^{2}y+3xy$

2. $6x-12$ 10. $4a^{4}b-16a^{2}b^{2}+4ab^{4}$

3. $2x^{2}+8x$ 11. $6a^{3}b^{2}-12a^{2}b^{3}+18ab$

4. $10x^{2}y-15xy^{2}$ 12. $15x^{3}+24x^{2}+36$

5. $12x^{2}-19x+15$ 13. $13a^{3}b^{2}+39a^{2}b-26ab^{4}$

6. $18m^{2}n^{4}-12m^{2}n^{3}+24m^{2}n^{2}$ 14. $15a+25b$

7. $17x^{2}+34x+51$ 15. $8x-56x^{3}$

8. $2x^{3}-3x^{2}+5x$ 16. $14a^{2}+35a^{4}$

17. What is the greatest common factor of $42x^{3}y^{2}z$ and $28xy^{3}$?

A $14xy^{2}$ B $14x^{2}y^{2}$

C $7xy^{2}$ D $14xy$

**Mixed Review:**

Add or Subtract.

18. $\left(3x^{2}+1\right)+\left(4x^{2}+3\right)$ 19. $\left(x^{5}-4x^{4}+1\right)-\left(-7x^{4}+11\right)$

Multiply.

20. $2y(4x^{2}+7xy)$ 21. $(a+4)(2a^{2}+3a+1)$ 22. $(3x+5)^{2}$