Block: _____

Factoring

Set 1: Factor the following polynomials by determining a **greatest common factor (GCF):**

1. $21x - 15y$

2. $14c^2 + 2c$

3. $5p^2 + 12q^2$

4. $8x^3y^4 - 22x^5y^6$

5. $10a^2b^2 + 9ab^2 - a^2b$

6. $21m^5n^2 + 6m^3n + 15m^2$

Set 2: Factor the following **difference of squares:**

7. $a^2 - 64$

8. $y^2 - 289$

9. $m^2 + 81$

10. $1 - 25n^2$

11. $16x^2 - 49y^2$

12. $w^4 - 100$

13. $c^2 - 81d^2$

14. $196a^2 - b^2$

Set 3: Factor the following **trinomials**.

15. x^2+7x+6

16. $m^2-17m-38$

17. $y^2-10y+16$

18. $p^2+9p-36$

19. $c^2-12c-45$

20. $w^2-16w+64$

21. $a^2+13a-30$

22. $x^2-27x-90$

Set 4: Find a **GCF first**, then factor the remaining **difference of squares** or **trinomial**.

23. $75r^2-48$

24. $45x^2-5$

25. m^3n-mn^3

26. $6a^3-24ab^2$

27. $3x^2+15x-72$

28. $2m^2-4m+2$

29. x^3+9x^2-52x

30. $4y^3+4y^2-120y$