

Name _____

Period _____

Factoring Practice**Factor Patterns:**

Trinomial Squares: $a^2 + 2ab + b^2 = (a + b)^2$

$a^2 - 2ab + b^2 = (a - b)^2$

Difference of Squares: $a^2 - b^2 = (a + b)(a - b)$

Sum of Two Cubes: $a^3 + b^3 = (a + b)(a^2 - ab + b^2)$

Difference of Two Cubes: $a^3 - b^3 = (a - b)(a^2 + ab + b^2)$

1. $x^2 + 10x + 9$

2. $r^2 + 8r + 15$

3. $n^2 + 2n - 3$

4. $n^2 + 6n - 7$

5. $2n^2 - n - 3$

6. $6n^2 - 19n + 15$

7. $10n^2 - n - 3$

8. $6x^2 - 31x + 5$

9. $6n^2 - 3n - 9$

10. $6n^3 - 7n^2 - 5n$

11. $2x - 16x^4$

12. $5t^4 - 25t^2 + 20$

13. $5t^4 - 7t^2 + 2$

14. $2t^4 - 9t^2 + 9$

15. $7(r - s) + t(r - s)$

16. $u(v - 2) + 2(2 - v)$

17. $3a + ab + 3c + bc$

18. $x^2 - 2x + xy - 2y$

19. $p^3 - 2p^2 + 4p - 8$

20. $u^2 - 3uv - 6uw + 18vw$

21. $a^2 + ab - ac - bc$

22. $4z^3 - 6z^2 - 6z + 9$

23. $x^2 - 81$

24. $x^2 - 36$

25. $3x^2 - 27$

26. $y^2 - 144$

27. $x^4 - 16$

28. $y^4 - 81$

29. $m^2 - 8m + 16$

30. $x^2 + 6x + 9$

31. $9p^2 + 6p + 1$

32. $y^2 - 10y + 25$

33. $75y^2 - 3$

34. $x^2 - 14x + 49$

35. $n^3 - 16n^2 + 64n$

36. $4x^3 + 32$

37. $n^3 - 1728$

38. $1 + 8x^3$

39. $50x^3 - 20x^2y + 2xy^2$

40. $(x + 2)^2 - 81$

41. $y^6 + 27$

42. $y^6 - 729$

43. $3x^2 - 24x + 48$

44. $ax - bx + ay - by$

45. $3n^2 + 2r - 2nr - 3n$

46. $1 + 27y^3$

47. $64 + s^3$

48. $48 - 24d + 3d^2$

49. $32x^3 - 48x^2$

50. $(n + 3)^2 - 8(n + 3) + 16$