

Name: _____

Date: _____

Factoring Trinomials 5 – Factor Out **Answers**

Section I. Factor by factoring out

1. $2x^2 - 10x$

$2x(x - 5)$

2. $5x - 20x^2$

$5x(1 - 4x)$

3. $x^2y - 3x^2$

$x^2(y - 3)$

4. $ab^2 + 4b^2$

$b^2(a + 4)$

5. $x^2z + y^2z^2$

$z(x^2 + y^2)$

6. $c^4d^2 + c^2d^3$

$c^2d^2(c^2 + d)$

7. $18x - 16y$

$2(9x - 8y)$

8. $15a + 25ab$

$5a(3 + 5b)$

9. $4a + 20b$

$4(a + 5b)$

10. $6m - 12n$

$6(m - 2n)$

11. $3x - 6y + 12$

$3(x - 2y + 4)$

12. $4a - 8b + 16c$

$4(a - 2b + 4c)$

13. $5 + 15n + 45m$

$5(1 + 3n + 9m)$

14. $7 + 28a - 35b$

$7(1 + 4a - 7b)$

15. $13a^2 - 169a$

$13a(a + 13)$

16. $15g + 225g^3$

$15g(1 + 15g^2)$

17. $8x - 56x^3$

$8x(1 - 7x^2)$

19. $14m^2 + 35m^4$

$7m^2(2 + 5m^2)$

21. $h^3 - 3h^2 + 17h^4$

$h^2(h - 3 + 17h^2)$

23. $3y^3 + 3y^2 + 6y$

$3y(y^2 + y + 2)$

25. $x^3 - 3x^2y + 3xy$

$x(x^2 - 3xy + 3y)$

27. $4g^4h - 16g^2h^2 + 4gh^4$

$4gh(g^3 - 4gh + h^3)$

29. $15p^2q^2 + 225p^3q^3 + 15p^4q^4$

$15p^2q^2(1 + 15pq + p^2q^2)$

31. $15j^3 + 24j^2 + 36j$

$3j(5j^2 + 8j + 12)$

33. $a^3b^3 + a^2b^2 + ab$

$ab(a^2b^2 + ab + 1)$

18. $3f^2 + 12f^4$

$3f^2(1 + 4f^2)$

20. $23j^5 - 46j^2$

$23j^2(j^3 - 2)$

22. $a^4 - 3a^3 + 17a^2$

$a^2(a^2 - 3a + 17)$

24. $5w^4 - 5w^2 + 25w$

$5w(w^3 - w + 5)$

26. $6x^4 + 3x^3y^2 + 12x^2y^3$

$3x^2(2x^2 + xy^2 + 4y^3)$

28. $6m^3n^2 - 12m^2n^3 + 18mn$

$6mn(m^2n - 2mn^2 + 3)$

30. $13x^3y^2 + 39x^2y - 26xy^4$

$13xy(x^2y + 3x - 2y^3)$

32. $7c^3 - 28c^2d + 35cd^3$

$7c(c^2 - 4cd + 5cd^3)$

34. $25mn + 5m^2n^2 + 15m^2n^3$

$5mn(5 + mn + 3mn^2)$