

Chapter 9 Section 1: Introduction to Factoring Polynomials

Problems

Use the methods presented in the lesson to factor each polynomial.

Recall that the order of the factors does not matter, so that $(a + b)(c + d) = (c + d)(a + b)$.

1. $5x - 10 =$ _____ 2. $12m - 8 =$ _____ 3. $6 + 6p^2 =$ _____

4. $3a + 3b =$ _____ 5. $2r - 2st =$ _____ 6. $4x^2 + 4 =$ _____

7. $9a^2 + 48ab =$ _____ 8. $34p^2 - 51pq =$ _____ 9. $57cd - 38d^2 =$ _____

10. $27rs + 42s^2 =$ _____ 11. $3m^3 + m^2 + 3m =$ _____

12. $6ab^2 + 9a^2b - 12ab =$ _____ 13. $12p^3q - 18p^2q^2 + 24pq^3 =$ _____

14. $5x^4 + x^3 + 4x^2 =$ _____ 15. $2c^5 + 4c^4 + 6c^3 + 8c^2 =$ _____

16. $3a + 6a^2 + 9a^3 + 12a^4 =$ _____ 17. $4rs + 6r^2 - 8rs^2 =$ _____

18. $9u^3v - 6u^2v^2 + 15uv^2 =$ _____

19. $98a^5b^3c^4 - 42a^3b^6c^2 - 63a^4b^4c^3 =$ _____

20. $-52x^7y^5z^6 + 91x^4y^6z^3 - 65x^5y^4z^4 =$ _____

21. $x(u - v) + y(u - v) =$ _____

22. $p(s+t) - q(s+t) =$ _____

23. $a(2+r) + 4 + 2r =$ _____

24. $2b(s-3) + 3s - 9 =$ _____

25. $c(2d-3) + 4(2d-3) =$ _____

26. $5(m-6n) - x(m-6n) =$ _____

27. $ax - ay + bx - by =$ _____

28. $us + vs + ut + vt =$ _____

29. $ab^2 + b + ab + 1 =$ _____

30. $cd - 1 + cd^2 - d =$ _____

31. $m^2 + 6mn + 3m + 18n =$ _____

32. $3x - 6 + 9x^2 - 18x =$ _____

33. $s^2t^2 + s^2 - 3t^2 - 3 =$ _____

34. $5u^3 + u^2v^2 - 15uv - 3v^3 =$ _____

35. $2x^3 + x^2y^2 - 4xy - 2y^3 =$ _____