

1. Factor Completely: $12uvw^3 - 18uv^2w^2$
2. Factor Completely: $-14a^6b^6 + 49a^2b^3 - 21ab$
3. Factor Completely: $x(a + 2b) + y(a + 2b)$
4. Factor Completely: $3x^2(r + 3s) - 6y^2(r + 3s)$
5. Factor Completely: $(x - 5y)(a + 2) - (x - 5y)$
6. Factor Completely: $2ab + 2ac + 3b + 3c$
7. Factor Completely: $6x^2u - 3x^2v + 2yu - yv$
8. Factor Completely: $p(m - n) - q(n - m)$
9. Factor Completely: $2r - bs - 2s + br$
10. Factor Completely: $x^2 - 2x - 15$
11. Factor Completely: $y^2 + 11y - 26$
12. Factor Completely: $10x^2 - 19x + 6$
13. Factor Completely: $8x^2 - 23x - 3$
14. Factor Completely: $x^2 + 6x + 9$
15. Factor Completely: $-4x^2y - 4x^3 + 24xy^2$
16. Factor Completely: $x^2 + 4xy + 4y^2$
17. Factor Completely: $y^2 - 8y + 16$
18. Factor Completely: $81a^4 - 16b^2$
19. Factor Completely: $6x^2 - 7x - 1$
20. Factor Completely: $m^2 + 3mn - 10n^2$
21. Factor Completely: $r^2 + 24r + 144$
22. Factor Completely: $8x^2 - 72$
23. Factor Completely: $a^3 - 27$
24. Factor Completely: $(m + n)^2 - p^2$
25. Factor Completely: $9y^3 + 3y^2 - 6y$
26. Factor Completely: $16a^4b^3c^4 - 64a^2bc^6$
27. Solve by factoring: $3x(x + 2)(x - 1) = 0$
28. Solve by factoring: $x^2 - 9 = 0$
29. Solve by factoring: $y^2 - 7y + 12 = 0$
30. Solve by factoring: $5x^2 - 6x + 1 = 0$
31. Solve by factoring: $x(6x + 5) = 6$
32. Solve by factoring: $(x + 1)(8x + 1) = 18x$
33. Solve by factoring: $\frac{1}{8}x^2 - \frac{1}{4}x - 6 = 0$
34. Simplify: $\frac{12x^3y^2 - 8x^2y - 4x}{4xy}$
35. Simplify: $\frac{(3x - y)(2x - 3y)}{6xy}$

36. Divide: $\frac{8a^2+2a-3}{2a-1}$

37. Divide: $\frac{4x^2+6x-1}{2x+1}$

38. Divide: $\frac{3y^3-4y^2+2y+3}{y+3}$

39. Divide: $\frac{4x^2-9}{2x+3}$

40. Divide: $\frac{y^3-50}{y-5}$