



Factor Polynomials (Order 3) - By Grouping, Common Factors to Order 2

Factors, Coefficient 1

1 Consolidate the shared common factor to create 2 binomial factors

$$t^2(t - 6) - 25(t - 6)$$

A $(t + 6)(t^2 - 150)$

B $(t - 6)(t^2 - 25)$

2 Consolidate the shared common factor to create 2 binomial factors

$$p^2(p - 2) + 6(p - 2)$$

A $(p - 2)(p^2 + 6)$

B $(p + 2)(p^2 - 12)$

3 Consolidate the shared common factor to create 2 binomial factors

$$z^2(z + 2) + 3(z + 2)$$

A $(z + 2)(z^2 + 3)$

B $(z + 2)(z^2 - 3)$

4 Consolidate the shared common factor to create 2 binomial factors

$$z^2(z - 3) + 6(z - 3)$$

A $(z - 3)(z^2 + 6)$

B $(z + 3)(z^2 + 6)$

5 Consolidate the shared common factor to create 2 binomial factors

$$r^2(r - 6) + 5(r - 6)$$

A $(r + 6)(r^2 + 5)$

B $(r - 6)(r^2 + 5)$

6 Consolidate the shared common factor to create 2 binomial factors

$$n^2(n - 9) + 3(n - 9)$$

A $(n - 9)(n^2 + 3)$

B $(n + 9)(n^2 + 3)$

7 Consolidate the shared common factor to create 2 binomial factors

$$r^2(r - 2) + 7(r - 2)$$

A $(r + 2)(r^2 - 7)$

B $(r - 2)(r^2 + 7)$

8 Consolidate the shared common factor to create 2 binomial factors

$$w^2(w - 9) - 9(w - 9)$$

A $(w + 9)(w^2 + 9)$

B $(w - 9)(w^2 - 9)$