



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

**1** Use grouping to remove a factor from this order 3 polynomial

$$m^3 + 3m^2 + 2m + 6$$

A  $(m - 3)(m^2 - 2)$

B  $(m + 3)(m^2 + 2)$

**2** Use grouping to remove a factor from this order 3 polynomial

$$t^3 + 8t^2 + 2t + 16$$

A  $(t + 8)(t^2 + 2)$

B  $(t - 8)(t^2 + 2)$

**3** Use grouping to remove a factor from this order 3 polynomial

$$p^3 - 2p^2 + 8p - 16$$

A  $(p - 2)(p^2 + 8)$

B  $(p + 2)(p^2 + 34)$

**4** Use grouping to remove a factor from this order 3 polynomial

$$x^3 - 3x^2 + 6x - 18$$

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

B  $(x + 3)(x^2 - 18)$

**5** Use grouping to remove a factor from this order 3 polynomial

$$y^3 - 3y^2 + 2y - 6$$

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

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

**6** Use grouping to remove a factor from this order 3 polynomial

$$w^3 - 3w^2 + 7w - 21$$

A  $(w - 3)(w^2 + 7)$

B  $(w + 3)(w^2 - 21)$

**7** Use grouping to remove a factor from this order 3 polynomial

$$q^3 + 9q^2 + 6q + 54$$

A  $(q + 9)(q^2 + 6)$

B  $(q + 9)(q^2 + 54)$

**8** Use grouping to remove a factor from this order 3 polynomial

$$r^3 + 6r^2 + 2r + 12$$

A  $(r + 6)(r^2 + 4)$

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