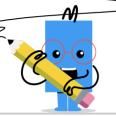


3

## mobius

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



- - Use grouping to remove a factor from this order 2 Use grouping to remove a factor from this order

$$m^3 + 3m^2 + 2m + 6 t^3 + 8t^2 + 2t + 16$$

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

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

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

- $(m+3)(m^2+2)$ 
  - Use grouping to remove a factor from this order \_\_\_\_ Use grouping to remove a factor from this order 3 polynomial

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

3 polynomial

$$p^3 - 2p^2 + 8p - 16 | x^3 - 3x^2 + 6x - 18$$

$$(p-2)(p^2+8)^{10}(p+2)(p^2+34)$$

$$(p-2)(p^2+8)(p+2)(p^2+34)(x-3)(x^2+6)(x+3)(x^2-18)$$

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

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

$$y^3 - 3y^2 + 2y - 6 | w^3 - 3w^2 + 7w - 21$$

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

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

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

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

$$|q^3 + 9q^2 + 6q + 54|r^3 + 6r^2 + 2r + 12$$

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

$$(q+9)(q^2+6)(q+9)(q^2+54)(r+6)(r^2+4)(r+6)(r^2+2)$$