

Grouping:

(4 or more terms)

Common factors

Difference of Squares

Trinomials

a) group in 2's

- Easy

b) remove a common factor (next)

$$(xy + 2x) + (4y + 8)$$

$$x(y+2) + 4(y+2)$$

we need 2 parts that look identical

c) remove the identical part
(y+2)

d) join together the left out elements
(x+4)

e) final ans. put together "c" & "d"
(y+2)(x+4)

$$(xy) + (2x + 4y) + (8)$$

$$(xy+8) + 2(x+2y)$$

$$(xy) + (2x) + (4y) + (8)$$

$$y(x+4) + 2(x+4)$$
$$(x+4)(y+2)$$

$$x^2 + ax - bx - ab$$

$$(x^2 + ax) + (-bx - ab)$$

$$x(x+a) - b(x+a) \quad (x+a)(x-b)$$

$$6x^3 + 3x^2 - 4x - 2$$

$$(6x^3 + 3x^2) + (-4x - 2)$$

$$3x^2(2x+1) - 2(2x+1) = (2x+1)(3x^2-2)$$

$$9mz - 4nc + 3mc - 12nz \quad \begin{matrix} 2+3 \\ 3+2 \end{matrix}$$

$$(9mz + 3mc) + (-4nc - 12nz)$$

$$3m(3z+c) - 4n(3z+c) = (3z+c)(3m-4n)$$

$$21xy - 12b^2 + 14xb - 18by$$

$$(21xy + 14xb) + (-12b^2 - 18by)$$

$$7x(3y+2b) - 6b(2b+3y)$$

$$(7x-6b)(3y+2b)$$



