

# Algebra I

## 5-10

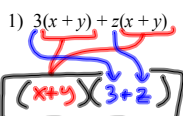
### Factor by Grouping

#### Factoring Order

- 1) Greatest Monomial Factor-
  - a) Stuff in common
  - b) Backwards distributive property
- 2) Difference of Squares
  - a) Must have two groups
  - b) Must be a subtraction
  - c) Each group must be a perfect square
  - d) Answer will always be a conjugate pair.
- 3) Backwards FOIL
  - a) Always starts out as three groups
  - b) Answer is two groups
- 4) Grouping

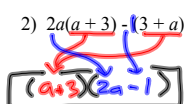
Factor.

1)  $3(x+y) + z(x+y)$



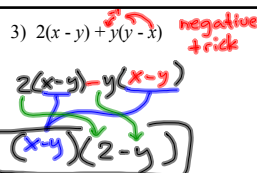
$(x+y)(3+z)$

2)  $2a(a+3) - 1(3+a)$



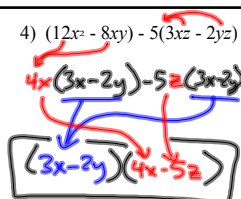
$(a+3)(2a-1)$

3)  $2(x-y) + y(y-x)$  *negative trick*



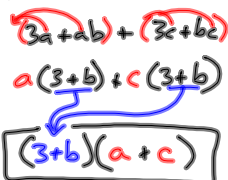
$(x-y)(2-y)$

4)  $(12x^2 - 8xy) - 5(3xz - 2yz)$



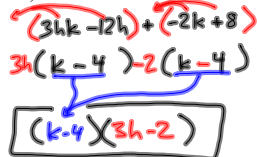
$(3x-2y)(4x-5z)$

5)  $3a + ab + 3c + bc$



$(3+b)(a+c)$

6)  $3hk - 2k - 12h + 8$



$(k-4)(3h-2)$

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2-34 even