

# Algebra I

## 5-11

### Mixed Factoring

#### 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
  - a) Four or more groups

Factor. (pg 228)

1)  $6a^2 - 9ab - 15b^2$

$$3(2a^2 - 3ab - 5b^2)$$

$$3(1a + 1b)(2a - 5b)$$

Handwritten work shows the factoring process with arrows and a small table below:

|      |      |
|------|------|
| +2b  | -5b  |
| -3ab | -3ab |
| -3ab | -3ab |

9)  $4m^3 - m$

$$m(4m^2 - 1)$$

$$m(2m+1)(2m-1)$$

15)  $-41a + 10 + 21a^2$

$$21a^2 - 41a + 10$$

$$(3a - 5)(7a - 2)$$

Handwritten work shows the factoring process with arrows and a small table below:

|      |      |
|------|------|
| -35  | -6   |
| -6a  | -6a  |
| -41a | -41a |

pg 228  
1-16 all

21)  $k(k+1)(k+2) - 3k(k+1)$

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

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

$$k(k+1)(k-1)$$

Pg 228

1-24all