

Algebra 3-4  
Unit 4: factoring

Name: \_\_\_\_\_

Multiply:  $(3x-2)(x+1)$

$$= 3x^2 - 2x + 3x - 2$$

$$= 3x^2 + x - 2$$

	$3x$	$-2$
$x$	$3x^2$	$-2x$
$+1$	$3x$	$-2$

1)  $(2x-4)(x+5)$

	$2x$	$-4$
$x$		
$+5$		

2)  $(x-7)(2x+3)$


Factor:  $5x^2 - x - 18$  step 1:

- 1st term in 1st box  
- last term in last box

	$5x^2$	
		$-18$

step 2: what pair of numbers multiply to  $-90$  ( $5x-18$ ) and adds to  $-1$ ?  
 $-10$  and  $9$

step 3:

	$x$	$-2$
$5x$	$5x^2$	$-10x$
$9$	$9x$	$-18$

find GCF in rows and columns

$$(x-2)(5x+9)$$

3)  $2x^2 + 17x + 21$

$2x^2$	
	$21$

mult: 42  
add: 17

4)  $3x^2 - 2x - 5$

$3x^2$	
	$-5$

mult:  $-15$   
add:  $-2$

5)  $5x^2 + 19x + 12$

$5x^2$	
	$12$

mult: 60  
add: 19



Factor:

6)  $3x^2 - 8x + 4$

7)  $2x^2 + 11x + 5$

8)  $4x^2 - 15x - 25$

9)  $6x^2 + 7x - 49$

10)  $6x^2 + 25x + 25$