

Warm up:

Factor.

$$18x^2 + 75x + 42 = 3(6x^2 + 25x + 14)$$

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

$756x^2$   
 $18x^2 + 12x + 63x + 42$   
 $6x(3x+2) + 21(3x+2)$   
 $(3x+2)(6x+21)$   
 $3(3x+2)(2x+7)$

$84x^2$   
 $6x^2 + 4x + 21x + 14$   
 $2x(3x+2) + 7(3x+2)$   
 $3(2x+7)(3x+2)$

$$(9x+6)(2x+7)$$

## HW Solutions

18

$$12x^2 + 69x + 45$$

$$3(4x^2 + 23x + 15)$$

$$3(4x + 3)(x + 5)$$

$$(10) \quad 5x^2 + 34x + 24$$

$$(5x + 4)(x + 6)$$

1, 24  
2, 12  
3, 8  
4, 6

$$5x^2 + 34x + 24$$

$$5x^2 + 30x + 4x + 24$$

$$5x(x+6) + 4(x+6)$$

$$\textcircled{1} \quad 2x^2 + 19x + 24$$

$$2x^2 + 16x + 3x + 24$$

$$2x(x+8) + 3(x+8)$$

$$(x+8)(2x+3)$$

Q20

$$5x^2 + 23x + 24$$

$$120x^2$$

$$5x^2 + 15x + 8x + 24$$

$$5x(x+3) + 8(x+3)$$

$$(x+3)(5x+8)$$

$$\textcircled{15} \quad 4x^2 - 13x + 10$$

$$40x^2$$

$$4x^2 - 8x - 5x + 10$$

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

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

# Factoring Puzzle