

Recall - Distribution

ex. $2(x - 3)$

Method 1: Arrows

$2(x - 3)$
 $2x - 6$

Method 2: Rectangles

	x	$- 3$
2	$2x$	-6

FOIL

First Outside Inside Last

ex. $(x + 1)(x + 3)$

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

$x^2 + 4x + 3$

ex. $(y + 3)(y + 2)$

$y^2 + 2y + 3y + 6$

$y^2 + 5y + 6$

ex. $(w - 4)(w + 2)$

$w^2 + 2w - 4w - 8$

$w^2 - 2w - 8$

ex. $(x - 1)(x - 1)$

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

$x^2 - 2x + 1$

ex. $(a - 12)(a - 3)$

$$a^2 - 3a - 12a + 36$$

$$a^2 - 15a + 36$$

ex. $(2x - 1)(3x + 5)$

$$6x^2 + 10x - 3x - 5$$

$$6x^2 + 7x - 5$$

ex. $(3x - 2)(4x + 2)$

$$12x^2 + 6x - 8x - 4$$

$$12x^2 - 2x - 4$$

ex. $(x - 5)^2 \rightarrow (x - 5)(x - 5)$

$$x^2 - 5x - 5x + 25$$

$$x^2 - 10x + 25$$

ex. $(2x + 4)^2 \rightarrow (2x + 4)(2x + 4)$

$$4x^2 + 8x + 8x + 16$$

$$4x^2 + 16x + 16$$

Salmon WS

Quiz → Monday
 (common factoring)
 Extra Practice
 WS

Common Factors

1. Find the greatest common factor of each list of terms.

a) 8, 12x

4

e) $8x^2y$, $12xy^2$

$4xy$

b) 8x, 12x

$4x$

f) $-15x^2y$, $10xy^2$, $-20x^2y^2$

$5xy$

c) 8x, 12y

4

g) $6x^4y^5$, $3x^5y^2$

$3x^4y^2$

d) 8xy, 12x

$4x$

h) $8x^3y^2$, $12xy^5$, $-24x^2y^4$

$4xy^2$

2. Complete each factoring.

a) $8y + 16 = 8(y + 2)$

c) $12x^2y + 20x^3y^2 = 4x^2y(3 + 5xy)$

b) $15c^2 - 45c = 15c(c - 3)$

d) $-15a^2b + 10ab^2 = -5ab(3a - 2b)$

3. Factor

a) $18x^3 - 27x$

$9x(2x^2 - 3)$

d) $8b^2 - 4b + 20$

$4(2b^2 - b + 5)$

b) $24a^3 + 18a$

$6a(4a^2 + 3)$

e) $5c^5 - 10c^3 + 15c$

$5c(c^4 - 2c^2 + 3)$

c) $3x^2 + 3x - 6$

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

f) $12x^3y + 6xy^2$

$6xy(2x^2 + y)$