

Concept: Multiplying Expressions

Name _____

- *You should have completed Algebra – Section 7 Part A: Multiplying Expressions before beginning this handout.*

OFF-COMPUTER COMPONENT

1. (a) Draw the tile representation for $(2x)(4x)$.

(b) What is the answer to $(2x)(4x)$? _____

2. (a) Draw the tile representation for $3x(x+1)$.

(b) What is the simplified form of $3x(x+1)$? _____

3. Simplify. Do not use tile drawings here.

(a) $(5a^3)(-3a^2) =$

(b) $(2ab)(6a^2b^3) =$

(c) $2(d - 3) =$

(d) $4g(g + 2) =$

COMPUTER COMPONENT: Part B

Instructions: In  follow the **Content Menu** path:

Algebra > Multiplying Expressions

NOTE: Use the **Menu** button in order to get to the lesson where you left off.



Work through all Sub Lessons of the following Lessons **in order**:

- *Multiplying Binomials*
- *Examples ... True or False?*



As you work through the computer exercises, you will be prompted to make notes in your notebook/math journal.

SUMMARY: Part B

1. Express $(x + 2)(x + 3)$ as a product of 4 sums : $x^2 + \underline{\hspace{1cm}} x + \underline{\hspace{1cm}} x + \underline{\hspace{1cm}} =$

2. What does the acronym FOIL stand for?

F ▷ _____

O ▷ _____

I ▷ _____

L ▷ _____

3. *Multiplying Binomials ... With Tiles.*

Example 1: (a) Draw tiles to fill this rectangle that is $(x+2)$ units by $(x+3)$ units.
Be sure to use a ruler.

(b) The total area is _____ units.

Example 2: (a) Draw tiles to fill this rectangle that is $(x+1)$ units by $(y+2)$ units.
Be sure to use a ruler.

(b) The total area is _____ units.

OFF COMPUTER EXERCISES: Part B

1. Use the FOIL rule in order to expand and simplify these binomials.

(a) $(x - 4)(x - 5)$

=

=

(b) $(x + 1)(x - 6)$

=

=

(c) $(2x + 6)(x + 4)$

=

=

(d) $(2x - 4)(3x + 2)$

=

=

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

=

=

(f) $(3x - 1)(2x + 2)$

=

=

(g) $(2a - b)(4a + b)$

=

=

(h) $(3m - 4n)(3m + 2n)$

=

=

(i) $(5v + 2w)(3v + 4w)$

=

=

(j) $(-p - 5)(-p + 9)$

=

=

(k) $(-z + 6)(z - 5)$

=

=

(l) $(-4c - 4d)(-9c - 5d)$

=

=

2. The following questions incorporate all of the skills that you have learned in this section:

- monomial x monomial
- monomial x binomial
- binomial x binomial

(a) $(5x^2)(7x^5)$

=

=

=

(b) $4(2a - 3b)$

=

=

=

(c) $-(4x + 5y - 1)$

=

=

=

(d) $-2(a^2 - 6a + 7)$

=

=

=

(e) $3x(x + 2) + 2x(x + 5)$

=

=

=

(f) $w(w + 2) - (2w - 2)$

=

=

=

(g) $5(x^2 + 2x - 7) - 3x(x + 4)$

=

=

=

(h) $6(2p - 5q) + 5(-6p + 2q)$

=

=

=

(i) $6(4m + 5)(3m + 5)$

=

=

=

(j) $2(2v - 9)(7v + 3)$

=

=

=