Name: _____ Date: _____

BLM 7.1.1

Practice: Multiply Two Binomials

1. Find each product.
a) $(x + 9)^2$ **b)** $(x + 10)^2$
c) $(x – 7)^2$ **d)** $(x – 8)^2$

2. Expand and simplify.
a) $(x + 1)(x + 2)$ **b)** $(x + 3)(x –1)$
c) $(x – 4)(x + 6)$ **d)** $(x – 5)(x –7)$

3. Find each square.
a) $(2x + 3)^2$ **b)** $(4x + 5)^2$
c) $(3x – 2)^2$ **d)** $(5x – 1)^2$

4. Expand and simplify.
a) $(4x + 1)(3x + 1)$ **b)** $(5x + 2)(6x –1)$
c) $(3x – 4)(2x + 3)$ **d)** $(7x – 5)(5x –7)$

5. Find each product.
a) $(x + 3)(x + 6)$ **b)** $(x + 3)(x – 6)$
c) $(x – 3)(x + 6)$ **d)** $(x – 3)(x – 6)$

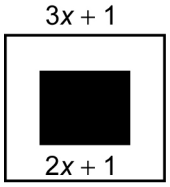
6. Walt shovels his driveway every morning during winter. The length of the driveway is $2x + 7$, while the width is $x + 3$. Write a quadratic expression that represents the area that Walt has to shovel.

7. Gina is setting up a flower garden for her mother in the backyard. The dimensions of the flower garden are $(x + 5)$ by $(3x + 1)$.
a) Write a quadratic expression that represents the area of the flower garden.
b) Suppose Gina wants to build a small fence around the garden. Write an expression to represent the perimeter of the fence.

8. Donna wants to paint the walls of her bedroom. The dimensions of each wall are $(x + 1)$ by $(4x + 1)$.
a) Write a quadratic expression that represents the area of one wall.
b) Write a quadratic expression that represents the area of the entire room with four walls.
c) If $x = 2$ m, what is the area of the entire room?
d) If paint costs \$0.50/m^2, how much will it cost Donna to paint her room?

9. Austin mows his neighbour's lawn during the summer. His neighbour's lawn is $(2x + 3)$ by $(3x + 2)$.
a) Write a quadratic expression that represents the area of the lawn.
b) If $x = 2$ m, what is the area that needs to be mowed?
c) If Austin charges his neighbour \$0.25/m^2 mowed, how much money will Austin make?

10. A wooden picture frame is in the shape of a square, and each side is $(3x + 1)$ long. A smaller square is cut out, so there is a viewing area for the picture. The smaller square has sides $(2x + 1)$ long.



a) Write a quadratic expression that represents the area of the frame with the square cut out of it.
b) If $x = 5$ cm, what is the actual area of the picture frame with the square cut out of it?

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