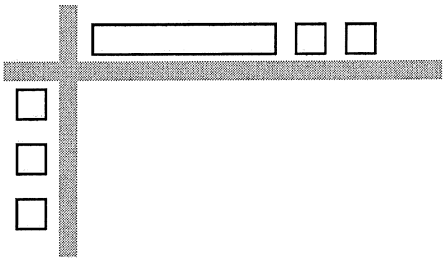
Student Name: _____ Date: _____

Monomial Models

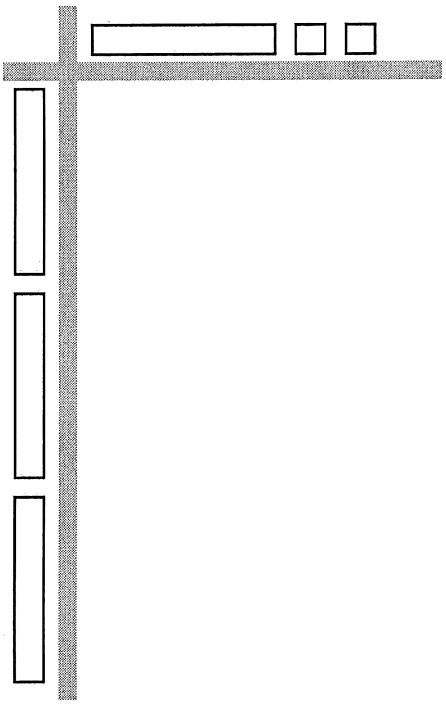
Use the tiles to help complete each of the following.

1. The expression $3(x + 2)$ could be interpreted as representing 3 groups of $(x + 2)$. The two factors of 3 and $(x + 2)$ are pictured below. Sketch a picture to complete the drawing showing the product of 3 and $(x + 2)$.



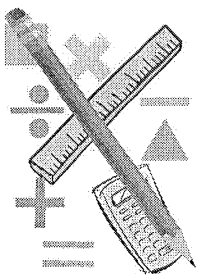
$3(x + 2) =$ _____ + _____

2. The expression $3x(x + 2)$ is represented below. Sketch a picture to complete the drawing showing the product of $3x$ and $(x + 2)$.



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

Communicating About Mathematics
Explain how these two multiplication situations are alike and how they are different.



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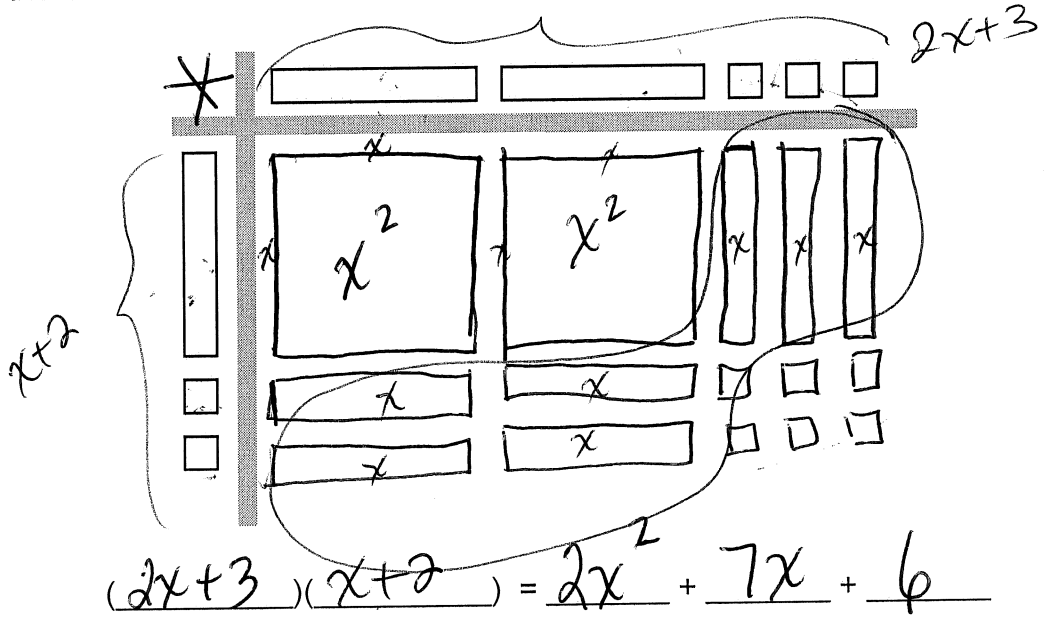
Student Name: _____ Date: _____

Binomial Models

1. What two factors are being multiplied together in the picture model shown below? Write these factors in the blanks on the left side of the equation below the picture model.

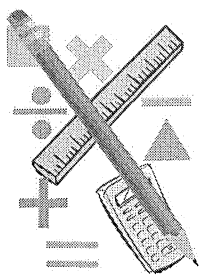


2. Use the tiles to build and sketch a picture to complete the drawing showing the product of the two given factors.

3. Write each term of the product in the blanks on the right side of the equation.

4. How is this process different from monomial multiplication?

Communicating About Mathematics
Explain how the product would change if the rectangle on the left side of the picture model above was shaded to represent a negative value.



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Student Name: _____ Date: _____

Binomial Multiplication

Complete this under chart on notebook paper. (Poly Matching Act)

1. Use the tiles to determine the product of $(x - 3)(-2x + 1)$. Draw a picture of the model and write the product in the blanks below.

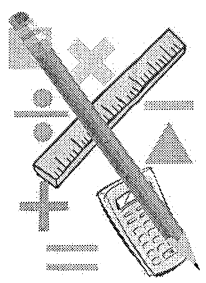
$(x - 3)(-2x + 1) =$ _____ + _____ + _____

2. Use the box method to determine the product of $(x - 3)(-2x + 1)$. Fill in the boxes below and write the product in the blanks.

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

$(x - 3)(-2x + 1) =$ _____ + _____ + _____

Communicating About Mathematics
Compare and contrast the two methods.



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