Name:_____ **TA:_____**

Foundations of Math 10 LG 4 Ver B

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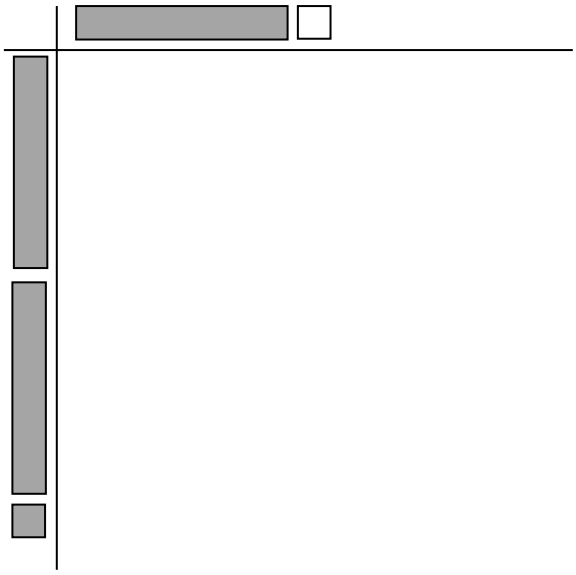
Expectation #1: Explain how multiplication of binomials is related to area and to the multiplication of two-digit numbers.

1. Show how you would multiply $(2x - 1)(x + 2)$ with algebra tiles. (2 marks)

2. What are the dimensions of this algebra tile model and what product does the algebra tile model show? (2 marks)



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Expectation #2: Multiply polynomials.

3. Multiply using the distributive property. Combine like terms where possible. (2 marks each)

a) $(x+2)(x+3)$

b) $(x-3)^2$

c) $(4x+3)(x-7)$

d) $(2m-k)(5m-9k)$

e) $(3x+7)(5x^3-x^2-3)$

f) $(x-3)(2x-5)-(2x+3)^2$

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4. A photograph with a length 4 inches and a width of 6 inches is put into a frame. The frame adds an extra x inches to the length and an extra y inches to the width. Write an expression for the combined area of the picture and frame. Multiply and then determine the area if $x = 2$ inches and $y = 1$ inch. (2 marks)

5. Pam multiplied the expression $(3x + 2y)(7x - 2y)$. When she checked her answer, she found that she had made a mistake.

$$\begin{aligned}(3x + 2y)(7x - 2y) &= 3x(7x - 2y) + 2y(7x - 2y)\\ &= 21x^2 - 6xy + 14xy - 4y^2\\ &= 21x^2 + 8x^2y^2 - 4y^2\end{aligned}$$

Indicate where Pam made her mistake and complete the correction for her. (2 marks)

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