Topic 3: Patterns in Proportional Reasoning - Block 5 Homework

1. One wedding-cake design has layers that are 2.5 inches tall. Use h to represent the height of the cake and l to represent the number of layers.   Write an algebraic rule that models the height of a wedding cake in this design. (Hint: Create a table.)

          What is the constant of proportionality? $k =$ _____

          Algebraic rule, or equation _____

2. Julie goes to the store to buy bananas. Bananas cost $1.50 per pound. Write an equation to help Julie determine the total amount, t, she will pay for a given number of pounds of bananas, b? (Hint: Create a table.)

          What is the constant of proportionality? $k =$ _____

          Algebraic rule, or equation _____

3. One wedding-cake design has a base layer that is 5 inches tall, and each additional layer is 3 inches tall. Use h to represent the height of the cake and t to represent the number of additional layers. Write an equation that gives the height of a wedding cake made in this design.

4. Josef gets an allowance of $10 per week. If he does chores, his parents give him an additional $3 per hour for every hour of work. Write an equation that Josef can use to find m, the amount of money he will have after a week of doing x additional hours of chores?

5. Courtney made the following pattern. What equation will tell you how many **white hexagons**, w, are needed for any given number of **black hexagons**, b? (Hint: Fill in the table.)

Figure	Black Hexagons, b	White Hexagons, w
1		
2		
3		

Equation: _____