1. Create a code and corresponding hanger model for the following sentence: *4 squares are less than 9 units.*

   Code (Hint: Is this an equation or inequality?): _____

   Hanger Model:

2. Allison wants to build a mobile that balances above her nephew's crib. She uses three mini wooden firefighter helmets on one side and 48 ounces of birch wood on the other side to create a balanced mobile.

   Sketch a diagram of Allison's mobile and then solve for the weight of one mini wooden helmet.

   Sketch of mobile:

   Weight of one mini wooden helmet: _____

3. What would you say to a friend who asked you to explain what inverse operations are? Use at least one example in your explanation.

4. Sketch your own hanger model using weights and one type of object: ball, cat, or dog. Your hanger can be balanced or unbalanced!

    1 = 1 oz, 5 = 5 oz, 10 = 10 oz,
    balls (b = 2 oz), cats (c = 3 oz) and dogs (d = 5.5 oz)
    (if sketching cats or dogs is challenging, you can use the letters)

    What is the code for your hanger model? _____

5. Starting with your code from question 4, show the operations you would use to solve your equation or inequality.

6. Mel was given the code 6q = 30 and decided to draw an arrow diagram to help her solve for the variable *q*. The upper arrow diagram had a continuous length that was labeled with a *30* and the lower arrow diagram was composed of two parts, one labeled with a *6* and the other labeled with the variable *q*. She said that *q = 24*. Do you agree or disagree with Mel's work and her answer? Explain your stance below.