

**Writing & Solving Equations to Model Real World Situations Homework**

**➤ DIRECTIONS: Work with your group to solve each problem. Be sure to write an equation or series of equation as a form of supporting your solution.**

1. On a certain horse farm, there are 12 more chestnut horses than bay horses, and twice as many gray horses as bay horses. In total, there are 52 horses. How many horses are bay?

2. A rectangular pool is going to be built in such a way that the width is two feet longer than double the length, and the length is no less than six feet. The pool will must have a perimeter less than 200 feet. Determine the range of possible lengths for the pool. Express your answer as a compound inequality, and explain the inequality via a short sentence.

3. Bob walks due North away from Billy who walks due South. Both boys walk at a constant pace, Bob's being 1.1 mph slower than twice Billy's. After half an hour, the boys are 3.2 miles apart. How fast is each person walking?

**\*Create any problem that could be modeled and solved using an algebraic equation and/or inequality.**