**Solve the word problems using inequalities. Some will be compound, some will be multi-step. *Underline or highlight the key words.* Graph your solutions.**

1) The ball used at a soccer game may not weigh more than 16 ounces or less than 14 ounces at the start of the match. After 1.5 ounces of air was added to a ball, the ball was approved for use in a game. Write and solve a compound inequality to show how much the ball might have weighed before air was added.

2) The Tennessean charges a fee of $650 plus $80 per week to run an ad. The City Paper charges $145 per week. For how many weeks will the total cost at the City Paper be less expensive than the cost at the Tennessean?

3) A red kite is 100 feet off the ground and is rising at 8 feet per second. A blue kite is 180 feet off the ground and is rising at 5 feet per second. How long will it take for the red kite to be higher than the blue kite? Round your answer to the nearest second.

4) The DMS band will sell pizzas to raise money for new instruments. The supplier charges $100 plus $4 per pizza. If the band members sell the pizzas for $7 each, how many pizzas will they have to sell to make a profit?

**Use the information to solve the next three problems:** Jenna’s band is going to record a CD at a recording studio. They will pay $225 to use the studio for one day and $80 per hour for sound technicians. Jenna has $200 and can reasonable expect to raise an additional $350 by selling pre-orders for the CD.

5) Explain how the inequality 200 < 225 + 80x < 550 can be used to find the number of hours Jenna and her band can afford to use the studio and sound technicians.

6) Solve the inequality. Are there any numbers in the solution set that are not reasonable to the situation?

7) Suppose Jenna raises $350 in pre orders. How much more money would she need to raise if she wanted to use the studio and sound technicians for 6 hours?