- After you write your "Let" statements, figure out what inequality sign you will use based on the wording in the problem, then figure out what to write on each side of the inequality sign.
- If it is a compound inequality, figure out your "boundaries" first, then decide what goes in between (is it just "x" or is it an expression involving more than "x"?)
- Once you SOLVE your inequality, you must INTERPRET your answer and write the APPROPRIATE answer in statement form.

Please show all your work on a separate sheet of paper.

1. The lengths of the sides of a triangle are consecutive odd numbers. What is the length of the longest side if the perimeter is at most 45?

2. Allison practices her violin for at least 12 hours per week. She practices for three-fourths of an hour each session. If Allison has already practiced 3 hours this week, how many more sessions remain for her to meet or exceed her weekly practice goal?

3. Tom is deciding whether or not he should become a gym member to use their basketball courts. The membership cost is $135. Members pay $2 to rent out the basketball courts. Non-members can rent the court also, but they have to pay $11 each time. How many times would Tom need to rent the court in order for it to be cheaper to be a member than a non-member?

4. The perimeter of a square must be less than 160 feet. What is the maximum length of a side in feet?

5. You have a $250 gift card to use at a sporting goods store. The pair of NIKE sneakers you want cost $80 and socks cost $12 per pair. Write an inequality that represents the possible number of socks you can buy when you buy 2 pairs of sneakers. Can you buy 8 pairs of socks? Explain.

6. Using the above example, describe what the inequality $60 + 80x \leq 250$ represents.

7. Write (and solve) and inequality to find three consecutive odd integers with a sum between 64 and 74.

8. The sum of three consecutive even integers is at least 80 and at most 90. What is the largest possible combination of these three integers?

9. John has a board that is 5 **feet** long. He plans to use it to make 4 shelves whose lengths are to be a series of consecutive even integers. How long should each shelf be in **inches**? (hint: convert)

10. Keith has $500 in a savings account at the beginning of the summer. He wants to have at least $200 at the end of the summer. He withdraws $25 per week for food, clothing, and movie tickets. How many weeks can Keith withdraw money from his account?