ACC. Coordinate Algebra NAME _____
Unit 1—Preview

Lucy's Linear Equations and Inequalities

Lucy has been assigned the following linear equations and inequality word problems. Help her solve each problem below by using a five step plan.

- Drawing a sketch, if necessary.
- Defining a variable (use only one variable for these problems).
- Setting up an equation or inequality.
- Solve the equation or inequality.
- Make sure you answer the question.

1. The sum of 38 and twice a number is 124. Find the number. (Remember to show the equation you solved.)

2. The sum of two consecutive integers is less than 83. Find the pair of integers with the greatest sum.

3. A rectangle is 12 meters longer than it is wide. Its perimeter is 68 meters. Find its length and width.

4. The length of a rectangle is 4 cm more than the width and the perimeter is at least 48 cm. What are the smallest possible dimensions for the rectangle?

5. Find three consecutive integers whose sum is 171. (Remember to show the equation you solved. Try not to just guess and check.)

6. Find four consecutive <u>even</u> integers whose sum is 244. (Again, don't forget your equation.)

7. Alex has twice as much money as Jennifer. Jennifer has $6 less than Shannon. Together they have $54. How much money does each have? (Remember to define a variable—use only one variable.)

8. There are three exams in a grading period. A student received grades of 75 and 81 on the first two exams. What grade must the student earn on the last exam to get an average of no less than 80 for the grading period?