APPLICATIONS OF LINEAR INEQUALITIES

Directions: Read the following statements. Define the variable *n*. Write an inequality in terms of *n*. Using the inequality, solve for *n* and answer each question. Make sure the solution is *reasonable*, and then graph it on a number line.

1. A crate weighs 6kg when empty. A lemon weighs about 0.2 kg. For economical shipping the crate with lemons must weigh at least 45kg. How many lemons should be put in the crates?

2. Three times a number is less than two times the same number. Find the number.

3. Suppose admission to a carnival is $4.00. You allow $3.00 for lunch and $1.00 for a snack. Each ride is$0.80. You have $15 to spend. How many rides can you go on?

4. A card printer charges $5.00 to set up each job and additional $4.00 per box of 100 cards printed. What is the greatest number of boxes you could have printed for under $100?

5. A hamburger bun is 200 calories. One ounce of hamburger has about 80 calories. How large a plain hamburger with bun can you eat and still be under 600 calories?

6. Pam received $100 for graduation and spends $6 of it a week. How many weeks can she do this and still have more than $25 left?

7. A summer camp needs a boat and motor. The Community Chest (a local charity) will donate the money on the condition that the camp spends less than $1500 for both. The camp decides to buy a boat of $1065. How much can be spent on the motor?

8. Seven less than twice a number is greater than the number increased by 3. Find the number.

9. A super market will pay you $5.50 per hour for working on weekends. What is the fewest number of hours you can work and earn more than $60 a week?

1. At a certain parking lot, you pay $0.75 for the first hour and $0.50 for each additional hour (or part of and hour.) What is the greatest number of hours you could leave a car in the lot and still spend less than $3.00?