

Word Problems: Linear Equations

Assign variables, write an equation, and solve.

- 1) The sum of two consecutive even integers is 218. What are the integers?
- 2) The length of the second side of a triangle is 3 cm shorter than the first side, and the third side is twice as long as the first side. If the perimeter is 49, how long are the 3 sides?
- 3) The length of a rectangular field is 7 m less than 4 times the width. The perimeter is 136 m. Find the width and the length of the rectangle.
- 4) Bill's weight is 48 kilograms. This is 10 kilograms more than one half of his father's weight. What is his father's weight?
- 5) Find three consecutive odd integers whose sum is 13 more than twice the largest of the three integers.
- 6) Sherry is 31 years younger than her mom. The sum of their ages is 61. How old is Sherry?
- 7) John worked five less than twice as many hours as Jane did. How many hours did each work if together they worked 97 hours?
- 8) The perimeter of a regular octagon is 128 inches. Find the length of each side.
- 9) Luis and three friends went golfing. Two of the friends rented clubs for \$6 each. (Luis and the other friend had their own clubs.) The total cost of the rented clubs and green fees for each person was \$76. What was the cost of the green fee for each person?

Word Problems: Linear Inequalities

- 10) Twenty more than a number is less than twice the same number. Find the smallest possible value of the number.
- 11) 9 less than a number is at most that same number divided by 2. Find the largest possible value of the number.
- 12) Jeffery has grades of 93 and 81 on the first two tests of the quarter. Progress reports will go home after the third test. If Jeffery does not have a A average on his progress report, he can not go to the football game that week. Jeffery will have to make at least what grade on the third test to be allowed to go to the football game?
- 13) Josh and Pam have bought an older home that needs some repair. After budgeting a total of \$1685 for home improvements, they started by spending \$425 on small improvements. They would like to replace six interior doors next. What is the maximum amount they can afford to spend on each door?
- 14) A trucking company is hired to deliver 125 lamps for \$12 each. The company agrees to pay \$45 for each lamp that is broken during transport. If the trucking company needs to receive at least a payment of \$1365, find the maximum number of lamps that can be broken during transport.