1. A 100-point test has *x* questions worth 2 points apiece and *y* questions worth 4 points apiece.

# What is the total that is given? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Define Variables: x=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, y= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

a. Write an equation that describes all possible numbers of questions that may be on the test.

b. If you have 24 questions worth 4 points apiece, how many questions will be worth 2 points apiece?

2.At age 12 Patrick weighed 43 kg; at age 14 he weighed 50 kg. Patrick’s age and weight are related.

**Define the variables in this situation**: x= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ y= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**What is the given information in this problem (find all that apply)?**

y-intercept \_\_\_\_\_\_\_\_ slope \_\_\_\_\_ Total: \_\_\_\_\_\_\_\_\_\_

one point  a second point: 

a. Find a linear equation relating Patrick’s weight to his age.

b**. Use your equation** to find out Patrick’s age when he weighed 38 kg.

3. Tyler is given $50 to spend on a vacation. He decides to spend $5 every day. The amount Tyler has left and the number of days are related.

**Define the variables in this situation**: x= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ y= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Write a linear equation relating x and y:
2. **Use your equation** to find when Tyler will have $15 left.

**Algebra Book Page 82:**

3)

4)

6)

9)

12)

13)

14)

18) (Hint: Start in Point-Slope Form! Final equation should be in Slope-Intercept Form)