Writing Equations

Write variable expressions and an equation for each situation. Solve by guess and check.

1. Marie bought 12 fruits, of which there were x apples, five fewer oranges than apples, and one pineapple.
   
   a. Write a variable expression for the amount of oranges.
   b. Write an equation that expresses the total amount of fruit that Marie has.
   c. How many apples did she buy?
      Oranges?

2. Cucumbers cost 15¢ each and tomatoes costs 9¢ each. Mom buys six more tomatoes than cucumbers. Her total bill is $1.26.
   
   a. Choose a variable for the amount of cucumbers.
   b. Write a variable expression for the amount of tomatoes.
   c. Write a variable expression for the cost of the cucumbers, then for the cost of the tomatoes.
   d. Write an equation about the total bill using the variable expressions from parts b and c.
   e. How many cucumbers did she buy?
      Tomatoes? (You can guess and check).

3. Jack is 25 years younger than his mother. Together, their ages add up to 89.
   
   a. Choose a variable for Jack’s age.
   b. Write a variable expression for Jack’s mom’s age.
   c. Write an equation about the sum of their ages.
   d. How old is Jack?

4. Lorene has some nickels, twice as many dimes as nickels, and half as many quarters as nickels. All total she has 77 coins.
   
   a. Choose a variable for the amount of nickels.
   b. Write a variable expression for the amount of dimes, and for the amount of quarters.
   c. Write an equation that expresses the total number of Lorene's coins, using the variable expressions from part b.
   d. How many dimes does Lorene have? Quarters?