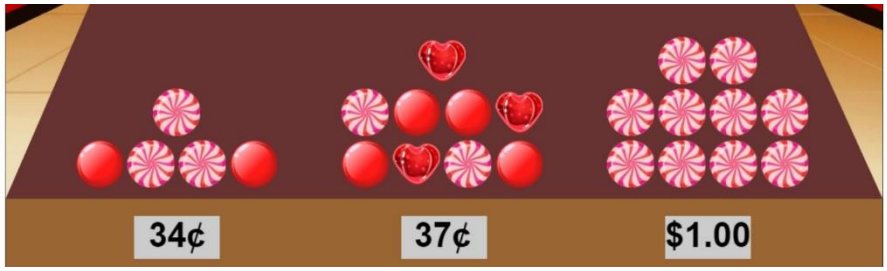
Math 4. Homework #5.

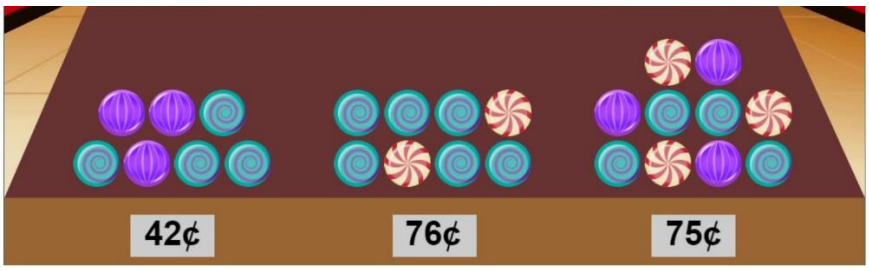
1. Assign each candy a variable, and find the price of each candy by solving a system of equations.

a)

b)



c)



2. Compute the following expressions:

   a) 5!

   b) $\frac{8!}{6!}$

   c) $\frac{n!}{(n-1)!}$

   d) $\frac{n!}{3!\,(n-2)!}$

3. Compute the LCM and GCF of the following pairs of numbers

   a) 15 and 21

   b) 22 and 132

   c) 27 and 60

   d) (challenge problem) $5x^2y \; and \; 3xy^2$

4. How many ways are there to put 6 books on a bookshelf?

5. Consider the following two problems

    a) There are 10 students in the 4th grade. They have to choose a president, a vice president and a secretary of the class. How many different ways are there to do it?

    b) There are 10 students in the 4th grade. They have to choose a team of two students to go to the math competition. How many different ways are there to do it?

What is similar about these two problems?

What is the difference between these two problems?

Are the answers the same or different? Why?

Answer the two given problems.