**A3.** In python, a tuple is a collection of similar to list in that it is an ordered collection of items. An importance difference, however, is that a tuple is immutable – once created, a tuple cannot be changed. Also, tuples are denotes using parenthesis instead of square brackets. As with lists, elements of a tuple are accessed using indexing notation.

For example, given the tuple subjects = (‘Physics’, ‘Chemistry’, ‘Biology’), we could access the elements of the tuple using subjects [0], subjects [1] and subjects [2].

Write a function checkout (), which takes a single argument, candies, which is a list of tuples,. Each tuple in the list indicates, in this order, (a) which kind of candy we are buying, (b) how many pieces of that candy we are buying (which we may assume is positive), (c) the unit price of that kind of candy. For example, the tuple (‘Gum’, 15, 0.25) indicates we are buying 15 pieces of gum, which cost $0.25 apiece. The function always returns a floating point value.

A 10% discount is awarded on a particular item if the customer purchases 5 or more of that item. The discount applies to the entire lot of that item. You may assume that all pieces of a particular kind of candy are purchased in a single lot. For example, the list of tuples would not have two or more separate tuples for ‘Gum’.

**A5** Bubble-Sort iterates over a list of numbers, comparing the elements in pairs and swaps them- if the first element in the pair is larger than the second. Swapping continues until the largest number “bubbles” to the top of the list, while the smallest elements says at the bottom.

