Solution Set to “Playing with Linear Lists”

• Save your workout for the gym, girlfriend. Pick up the heaviest objects last. (In other words, you picked up the 10-foot safe, and it was not the last item that you picked up.)

assuming that the heaviest item = 10
set x = getPos(gItems, 10)
if (x=0 or x = count(gItems)) then...

• Never purchase electrical appliances with frayed cords that may pose the danger of electrocution.

assuming that the frayed item = 5
if getPos(gItems, 5) > 0 then...

• If you leave a yard sale with fewer than ten objects, then consider it a wasted morning.

if count(gItems) < 10 then...

• With your shopping habits, you should stop at the ATM on your way to the yard sale. (In other words, you spent more than twice the amount of money you brought with you.)

on sum myList
  repeat with x in myList
    set priceTotal  = priceTotal + x
  end repeat
  return priceTotal
end

on sum myList
  repeat with x = 1 to count(myList)
    set priceTotal  = priceTotal + getAt(myList, x)
  end repeat
  return priceTotal
end

if sum (gItems) > gMoney * 2 then...

2. What might be the scripts for buttons that allowed you to remove the least and the most expensive items from your shopping cart?

deleteAt(gItems, (getMin(gItems)))
deleteAt(gItems, (getMax(gItems)))

3. If the application tests the system and discovers that it is a Windows user doing the shopping, then a “we don’t like your type ‘round here” fee of $2 per item is added. What statement or statements would accomplish this task?

gItems = gItems + 2
4. If you enroll in the special yard sale carrying service, a big burly man carries all of your items for you. However, listed along with the price is a special carrying fee that is added to a separate list as you put items in your shopping cart. What expression allows you to add the cost of the item itself to the carrying fee in order to arrive at a list of the total amounts for each item include carrying fee?

\[ g\text{items} = g\text{items} + g\text{Fees} \]

5. In the Georgia Bureaucrats for More Red Tape fundraising yard sale, different items are taxed differently. As you collect items in your shopping cart, two lists are maintained; one with the base price and the second with the tax percentage that will be charged for that item. What expression can be used to calculate a list of taxes to then be added up using the SUM custom handler?

\[ g\text{TaxAmtList} = g\text{PriceList} \times g\text{TaxPercentList} \]

\[ \text{sum (} g\text{PriceList} + g\text{TaxAmtList}) \]

6. One of the yard sale cashiers is notorious for “the big three” scam, known all over the Southeast. She always claims that the third item was mislabeled and actually costs one dollar more than advertised. She will give you half her cut if you can develop a statement that calculates the new scam price that she will need to punch into the cash register for that third item.

\[ \text{set scamPrice} = \text{getAt(gitems, 3)} + 1 \]
\[ \text{setAt gitems, 3, scamPrice} \]
\[ \text{sum(gitems)} \]

or if every third item is increased in price by $1, then to find a total for the transaction...

\[ \text{set PurchaseTotal} = \text{sum(gitems)} \]
\[ \text{if integer(count(gitems)/3) - count(gitems)/3} = .25 \text{ then} \]
\[ \quad \text{set PurchaseTotal} = \text{integer(count(gitems)/3)} + \text{PurchaseTotal} - 1 \]
\[ \text{else} \]
\[ \quad \text{set PurchaseTotal} = \text{integer(count(gitems)/3)} + \text{PurchaseTotal} \]
\[ \text{endif} \]