**Andrew Wang**

**Homework 1**

1. **Code:**

################

# Author: Andrew Wang

# Date: 9/7/2019

# This program calculates the number of sugar, butter, and flour needed to

# bake the number of cookies the user has inputted

#################

#sugar needed for 48 cookies

sugar = 1.5

#butter needed for 48 cookies

butter = 1

#flour needed for 48 cookies

flour = 2.75

#user input amount of cookies needed

cookies = float(input('How many cookies: '))

#calculates the number of sugar needed for the amount of cookies user has inputted

numofsugar = (1.5 / 48) \* cookies

#calculates the number of butter needed for the amount of cookies user has inputted

numofbutter = (1 / 48) \* cookies

#calculates the number of flour needed for the amount of cookies user has inputted

numofflour = (2.75 / 48) \* cookies

print("%.2f cups of sugar" %numofsugar)

print("%.2f cups of butter" %numofbutter)

print("%.2f cups of flour" %numofflour)

**Output:**

A screenshot of a cell phone

Description automatically generated

1. **Code**

################

# Author: Andrew Wang

# Date: 9/7/2019

# This program calculates the number of vines that will fit in a row using

# length of the row, amount of space used by end-post assembly, and space

# between vines

#################

#legnth of row (ft)

length = float(input('R= '))

#amount of space used by end-post assembly (ft)

amount = float(input('E= '))

#space between vines (ft)

space = float(input('S= '))

#calculates number of vines that will fit in the row

numofvine = ((length - 2 \* amount) / space) // 1

print("You have enough space for %.0f vine(s)." %numofvine)

**Output:**

**A screenshot of a cell phone

Description automatically generated**

1. **Code:**

################

# Author: Andrew Wang

# Date: 9/7/2019

# This program calculates the number of sugar, butter, and flour needed to

# bake the number of cookies the user has inputted

#################

#principle amount orginally deposited into account

p\_amount = float(input('P= '))

#annual interest rate

interest\_rate = float(input('r= '))

#number of times per year that the interest rate is compounded

num\_comp = float(input('n= '))

#specified number of year

spec\_year = str(input('t= '))

#amount of money in the account after specified number of years

money\_amount = p\_amount \* (1 + (interest\_rate / (num\_comp \* 100))) \*\* (num\_comp \* float(spec\_year))

print('At the end of ' +spec\_year+ ' years you will have')

print('$', format(money\_amount, ',.2f'),)

**Output:**

**A screenshot of a cell phone

Description automatically generated**