

Name: THANH LE
Student ID number: 015809792

----- QUESTION 1 -----

First, you think of a three-digit number, remember that it has first and last digits differ by at least two, then you reverse it and subtract the smaller from the larger. After that, you add the new number with its reverse together. I will guess what the result is.

Enter a three-digit number which has first and last digits differ by at least two: 123

Your number: 123

Reversed number: 321

Difference between the entered number and the reversed number: 198

The reverse of the difference: 891

The sum of the difference and the reversed difference: 1089

----- QUESTION 2 -----

How many cookies that you want to make? 98

To make 98 cookies, you need:

3.062 cups of sugar

2.042 cups of butter

5.615 cups of flour

CODE:

```
# Question 1
print("----- QUESTION 1 -----")
print("First, you think of a three-digit number, remember that it has first and last digits differ by at least two, then you reverse it and subtract the smaller from the larger. After that, you add the new number with its reverse together. I will guess what the result is.")

number = int(input("Enter a three-digit number which has first and last digits differ by at least two: "))

while (len(str(number))!=3) or (abs((number//100) - number%10) < 2):
    number = int(input("Enter again "))

print ("Your number:", number)

reversed_num = (number%10)*100 + ((number%100)//10)*10 + (number//100)
print ("Reversed number:", reversed_num, "\n")

difference = abs(reversed_num - number)
```

```
print ("Difference between the entered number and the reversed number:", difference, '\n')

reversed_difference = (difference%10)*100 + ((difference%100)//10)*10 + (difference//100)
print ("The reverse of the difference:", reversed_difference, '\n')

print ("The sum of the difference and the reversed difference:", difference + reversed_difference,
'\n')
```

Question 2

```
print("----- QUESTION 2 -----")
cookie_num = int(input("How many cookies that you want to make? "))
print("To make", cookie_num, "cookies, you need: ")
```

```
sugar = float((1.5/48)*cookie_num)
butter = float((1/48)*cookie_num)
flour = float((2.75/48)*cookie_num)
```

```
if sugar <= 1:
    print(format(sugar, '10,.3f'), "cup of sugar")
else:
    print(format(sugar, '10,.3f'), "cups of sugar")
```

```
if butter <= 1:
    print(format(butter, '10,.3f'), "cup of butter")
else:
    print(format(butter, '10,.3f'), "cups of butter")
```

```
if flour <=1:
    print(format(flour, '10,.3f'), "cup of flour")
else:
    print(format(flour, '10,.3f'), "cups of flour")
```