

## COP 3223 Recitation: Assignment Statement

### Problem A: Calorie Tracker

Ever since you got to college, your parents have been warning you about the freshman fifteen! You've decided that to combat the extra weight gain, you're going to write a program with your new programming skills to help you!

You'd like to keep track of how many calories you are consuming. You are hoping that keeping track of this information will nudge you into making better food choices. Luckily, the foods you eat are labeled with the number of grams of protein, carbohydrates and fat they contain.

Write a program that asks the user to enter these three values (grams of protein, carbohydrates and fat) consumed and prints out the total number of calories in that food.

Please use the following constants in your program:

```
#define CALS_PER_GR_PROTEIN 4
#define CALS_PER_GR_CARB 4
#define CALS_PER_GR_FAT 9
```

### Sample Run (User input in bold and italics)

How many grams of protein did you eat?

**50**

How many grams of carbohydrates did you eat?

**75**

How many grams of fat did you eat?

**15**

You ate 635 calories of food.

### **Problem B: Stolen Orange Juice**

You have been buying Simply UCF Orange Juice but have been surprised at how quickly your supply is running out. You realize that your roommate may be drinking some of your juice. To test your suspicion, you decide to weigh the container before you leave for class and then weigh it again after you get back from class. (Many eons ago, your chemistry teacher had bestowed upon you a free scale which, for sentimental reasons, you've kept.) As you suspected, the weight wasn't the same. Now it's time to determine how much money your roommate owes you for drinking your juice!

Write a program that asks the user to enter the following quantities

- 1) The weight of the original container, in ounces (positive integer)
- 2) The cost of the container, in dollars (positive real number to 2 decimal places)
- 3) The weight of the container when you left for class, in ounces
- 4) The weight of the container when you got back from class, in ounces (will always be less than the weight before class)

Your program should use this information to calculate the amount of money in dollars your roommate owes you. Display the result in dollars rounded to two decimal places.

### **Sample Run (User input in bold and italics)**

What is the weight (in oz.) of the original container of OJ?

**64**

What is the cost of the original container of OJ in dollars?

**3.79**

What was the weight (in oz.) of the container before class?

**48**

What was the weight (in oz.) of the container after class?

**35**

Your roommate owes \$0.77.