



2022 FOOD SCIENCE CDE

PROBLEM SOLVING/MATH PRACTICUM

1. You have created a protein bar for your new product line. It contains the following nutrients. If you want your product to meet a 400-calorie minimum, how many grams of protein do you need to add to the product?

Total Carbohydrates..... 42 grams

Dietary Fiber4 grams

Protein.....16 grams

Total Sugars.....18 grams

Cholesterol28 mg

Sodium180 mg

Total Fat12 grams

- a. 10 grams
 - b. 12 grams
 - c. 14 grams
 - d. 15 grams
2. You have a product ingredient you want to be 625 ppm in the formulation of the product. What percentage of the total product is this?
- a. .625 %
 - b. .0625%
 - c. .00625%
 - d. 6.25%
3. You need to calculate how much seasoned ground beef you will need for a batch of seasoned beef sticks that will have a yield of 68%. You need 1904 pounds of the snack stick to sell next week. How much seasoned beef do you need for this batch of product?
- a. 1,294.72 pounds
 - b. 1,300 pounds
 - c. 2,800 pounds
 - d. 3,000 pounds

4. You are tasked with relabeling a product with a change in weight for the product. The product currently has 675 grams. Your job is to convert it to ounces for the product label. How many ounces will you recommend for the label?

- a. 24.21
- b. 24.11
- c. 23.81
- d. 20.23

5. You are creating a new potato chip with dried potatoes, oils, rice flour, and potato starch. Using the amounts listed below for a bag of chips that contains approximately 19 chips, determine what percent potato starch is in the bag.

Dried potato	0.54 ounces
Oils	2 grams
Rice Flour	4 grams
Potato starch	1.69 grams

- a. 0.0735 %
- b. 73.47 %
- c. 7.35%
- d. 20.5%.