

## FOOD LABEL ASSIGNMENT (30 POINTS)

NAME:

Use the food label below to answer the following questions. SHOW ALL OF YOUR CALCULATIONS (not just the end number) with its appropriate units. If you do not show calculations, you will lose half of the credit for the assignment. All numerical answers must have a unit, either: SERVINGS, CALORIES, MG, OR GRAMS.

Use the following food label for this assignment!

| Nutrition Facts                                                                                                                                                     |                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| 4 servings per container                                                                                                                                            |                |
| Serving size 1 1/2 cup (208g)                                                                                                                                       |                |
| Amount per serving                                                                                                                                                  |                |
| <b>Calories</b>                                                                                                                                                     | <b>240</b>     |
|                                                                                                                                                                     | % Daily Value* |
| <b>Total Fat</b> 4g                                                                                                                                                 | <b>5%</b>      |
| Saturated Fat 1.5g                                                                                                                                                  | <b>8%</b>      |
| Trans Fat 0g                                                                                                                                                        |                |
| <b>Cholesterol</b> 5mg                                                                                                                                              | <b>2%</b>      |
| <b>Sodium</b> 430mg                                                                                                                                                 | <b>19%</b>     |
| <b>Total Carbohydrate</b> 46g                                                                                                                                       | <b>17%</b>     |
| Dietary Fiber 7g                                                                                                                                                    | <b>25%</b>     |
| Total Sugars 4g                                                                                                                                                     |                |
| Includes 2g Added Sugars                                                                                                                                            | <b>4%</b>      |
| <b>Protein</b> 11g                                                                                                                                                  |                |
| Vitamin D 2mcg                                                                                                                                                      | <b>10%</b>     |
| Calcium 260mg                                                                                                                                                       | <b>20%</b>     |
| Iron 6mg                                                                                                                                                            | <b>35%</b>     |
| Potassium 240mg                                                                                                                                                     | <b>6%</b>      |
| * The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice. |                |

1. How many GRAMS would you be consuming IF you ate **half** of the container? (**show your calculations**)

1 container = 4 servings

1 serving = 1 1/2 cups which has 208 grams

Therefore 1 container = 208 grams  $\times$  4 servings

1 container = 832 grams

If one ate half the container =  $\frac{1}{2} \times 832$  grams

Answer = 416 grams

2. How many Calories are there in 2 servings? (**show your calculations**)

1 serving = 240 calories

Therefore 2 servings =  $2 \times 240$  calories

Answer = 480 calories

3. The label shows there are 0 grams of trans fat in one serving. Can we be certain that there is no trans fat in this food? Why/why not?

Yes. It is certain that this food contains only 0 grams of trans fat. This is because there is no percentage representation of the daily value on the food label.

4. How many Calories from **carbohydrates** would you receive if you consumed 3 servings of this food? (**show your calculations**)

1 serving = 46 grams of carbohydrates

Therefore 3 servings = 46 grams of carbohydrates  $\times$  3

3 servings = 138 grams

Carbohydrates = 4 calories per gram

If 1 gram of carbohydrates contains 4 calories, Therefore 138 grams contain  $(138 \times 4)$  calories

Answer = 552 calories

5. If you ate **5 servings** of this food item, how many Calories from **saturated fat** would you be consuming? (**show your calculations**)

1 serving = 1.5 grams of saturated fat

5 servings =  $5 \times 1.5$  grams

5 servings = 7.5 grams

1 gram of saturated fat = 9 calories

Therefore 5 servings have  $(7.5 \times 9)$  calories

Answer = 67.5 calories

6. If you ate **half** of the contents of this container, how many Calories from **protein** would you be consuming? (**show your calculations**)

This container does not have proteins. Therefore this container provides 0 protein calories.

7. How many Calories from **potassium** are there in **2 servings** of this food? **Explain your answer.** (Hint: potassium is a mineral)

1 serving = 240 mg of potassium

Therefore, 2 servings =  $240\text{mg} \times 2$

2 servings = 480 mg

However, minerals like potassium do not have calories. Therefore the answer is 0 calories

8. One serving of this food would provide a “rich/excellent source” of which, if any, vitamins or minerals listed on the nutrition facts panel? (Hint: there is a technical definition for “rich/excellent source”)

The terms rich/ excellent source dictates that a certain vitamin or mineral contains more than 25% of its nutrients. Therefore, this food label contains a rich and excellent source of Iron which contains 35%.

9. **One serving** of this food will meet whose daily iron needs? Refer to the DRI tables in your textbook or use this link [https://www.cengage.com/nutrition/discipline\\_content/tables/DietaryReferenceIntakes.pdf](https://www.cengage.com/nutrition/discipline_content/tables/DietaryReferenceIntakes.pdf). List the age groups and genders **whose needs are met with 1 serving**. *There are no calculations or units required for the answer on this question.*

According to the DRI table, 1 serving meets the daily iron needs of females from the age of 14 years to 50 years and pregnant women.

10. **Calculate** the number of Calories in ONE serving (using the grams of carbohydrate, fat and protein listed on the food label and convert to Calories). Is your calculated number the same as the number on the food label? If the numbers are different, explain why.

1 serving = 46 grams of carbohydrates

1 gram of carbohydrates contains 4 calories

Therefore 1 serving contains  $46 \times 4$  calories which is = 184 calories

1 serving = 4 grams of fat

1 gram of fat = 9 calories

Therefore 1 serving contains  $4 \times 9$  calories which is = 36 calories

1 serving = 0 grams of proteins therefore 0 calories

Therefore total calories in carbohydrate, fat and protein listed on the food label =  $184 + 36$  calories

Answer = 220 calories

The calculated number is different from the number on the food label. This is because the number on the food label includes other contents that I have not included in my calculation. My calculation has only included carbohydrate, fat and protein listed on the food label

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