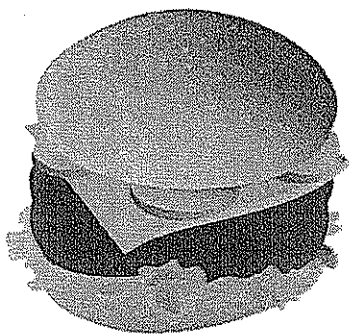


# DRIVE-THRU SCATTERPLOTS

Name: \_\_\_\_\_  
Date: \_\_\_\_\_ PD: \_\_\_\_\_

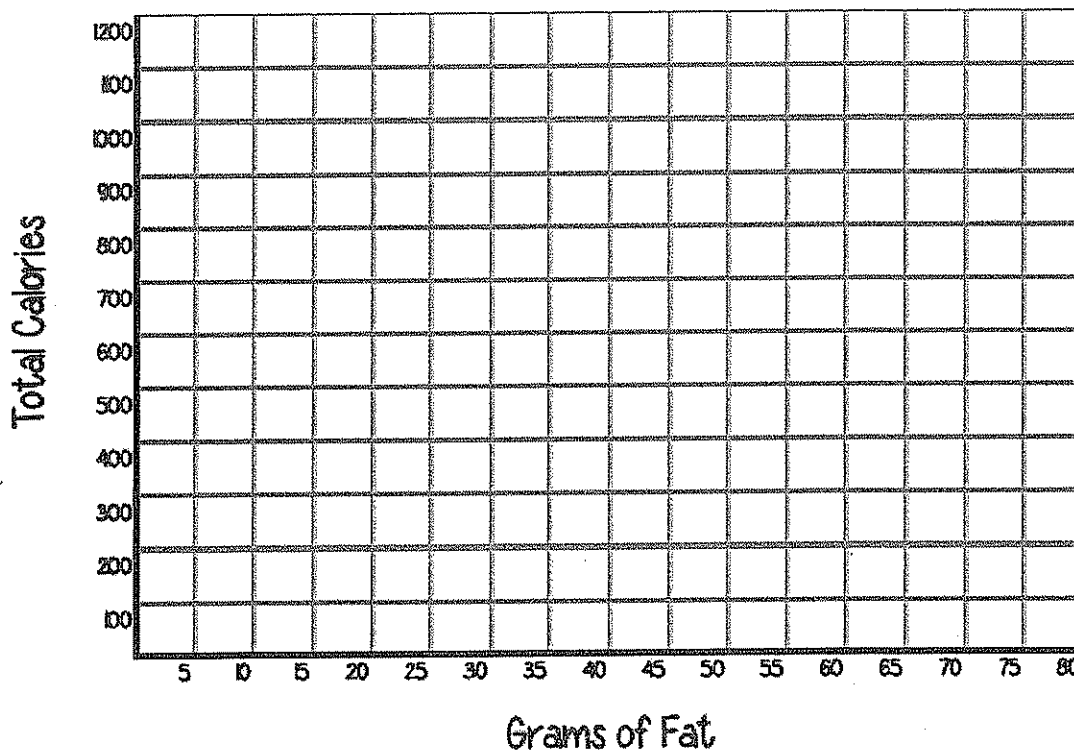


Have you ever looked at the nutrition information on a food box or a fast food menu? You may have seen measurements for Fat, Carbohydrates, and Protein. These are the three types of nutrients that contribute to the **calories** in a certain food. Many people who are trying to watch their diets try to limit how much fat, and therefore how many calories, they eat. Your task is to find the correlation between fat content and calories by plotting the data and finding a line of best fit.

## NUTRITIONAL INFORMATION - BURGER BASHER

| Item                         | Fat | Calories | Item                     | Fat | Calories |
|------------------------------|-----|----------|--------------------------|-----|----------|
| Hamburger                    | 10  | 260      | Cheeseburger             | 14  | 300      |
| Double Cheeseburger          | 26  | 450      | Triple Cheeseburger      | 44  | 670      |
| Fried Chicken Sandwich       | 39  | 630      | Grilled Chicken Sandwich | 18  | 470      |
| Super Bacon Buster Burger    | 59  | 870      | Jalapeno Bacon Burger    | 37  | 640      |
| El Ranchero Southwest Burger | 76  | 1120     | Schnitzel Burger         | 43  | 710      |
| Los Pollos Chicken Bites     | 29  | 500      | Overloaded Cheese Fries  | 35  | 630      |
| Double Fries                 | 18  | 300      | Mega Sundae              | 28  | 750      |

Create a scatter plot with your data. Plot each item on the graph.



## PART B

- ☆ Does there appear to be a correlation? Describe the correlation using math vocabulary like **strong**, **weak**, **positive**, and/or **negative correlation**.
  
- ☆ Using a **colored pencil**, draw the line of best fit on your graph.
  
- ☆ Try finding two points and estimating the slope of this line using the slope formula. What does the slope tell you about the correlation between calories and fat content in foods?
  
- ☆ One gram of fat actually takes 9 calories of energy to burn off. Why do you think you *didn't* get 9 for the slope of your line of best fit?

## PART C

Use your line of best fit to make predictions.

1. About how many calories would you expect an item with 5 grams of fat to have?
  
2. About how many calories would you expect an item with 70 grams of fat to have?
  
3. About how many calories would you expect an item with 80 grams of fat to have?
  
4. If an item had 900 calories in it, about how many grams of fat would you expect it to have?
  
5. If an item had 550 calories in it, about how many grams of fat would you expect it to have?
  
6. Would it be reasonable for a sandwich with 40 grams of fat to have 400 calories? What about 800 calories?

### Did you know?

**Interpolation** is when you predict a value that is between data points you already measured.

**Extrapolation** is when you predict value that is outside the range of the data points you already measured.