## Nutrition Task:

The table below shows fat grams and calories for some breakfast sandwiches.
Nutrition Facts

| Breakfast Sandwich | Total fat (g) <br> $\mathbf{x}$ | Calories <br> $\mathbf{y}$ |
| :--- | :--- | :--- |
| Arby's Bacon 'n Egg Croissant | 25 | 410 |
| Burger King Croissanwich with Suasage, Egg and <br> Cheese | 39 | 520 |
| Carl's Jr. Sunrise Sandwich | 21 | 356 |
| Hardee's Country Steak Biscuit | 41 | 620 |
| Jack in the Box Soudough Breakfast Sandwich | 26 | 445 |
| McDonald's Sausage McMuffin with Egg | 28 | 450 |
| Sonic Sausage, Egg, and Cheese Toaster | 36 | 570 |
| Subway Ham and Egg Breakfast Deli Sandwich | 13 | 310 |

a) Make a scatter plot of the data. Describe any patterns you notice.
b) Select two points and find the equation of the line that passes through these two points in point-slope form. Graph the equation on the scatter plot.
c) According to your model, how many calories would you expect in a Hardee's Country Steak Biscuit with 41 grams of fat.
d) Does the actual data point representing the Hardee's Country Steak Biscuit lie above, on, or below the line you graphed in part c? Explain what the point's location means.
e) Check each breakfast sandwich to find if its data point falls above, on, or below your line.
f) Based on your results for d and e , how well does your line fit the data?
g) If a sandwich has 0 grams of fat, how many calories does your equation predict? Does this answer make sense? Why or why not?

Taken from Murdock, J., Kamishke, E., \& Kamishke, E. (2010). Discovering Algebra: An Investigative Approach. Emeryville, CA. Pages 238-239

