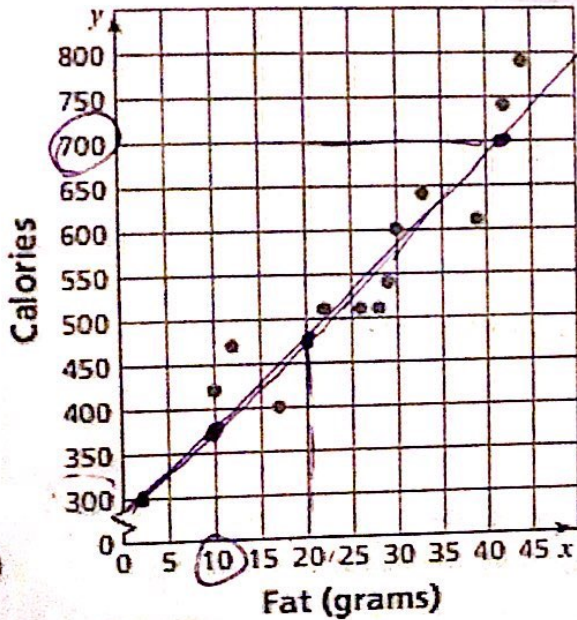


Day 12: Drawing and Using Lines of Best Fit Practice

Question: How do I draw and use a line to model scatterplots with positive or negative linear correlation?

For each scatterplot below, draw a line of best fit. Then use the line to answer the questions.

Restaurant Sandwiches

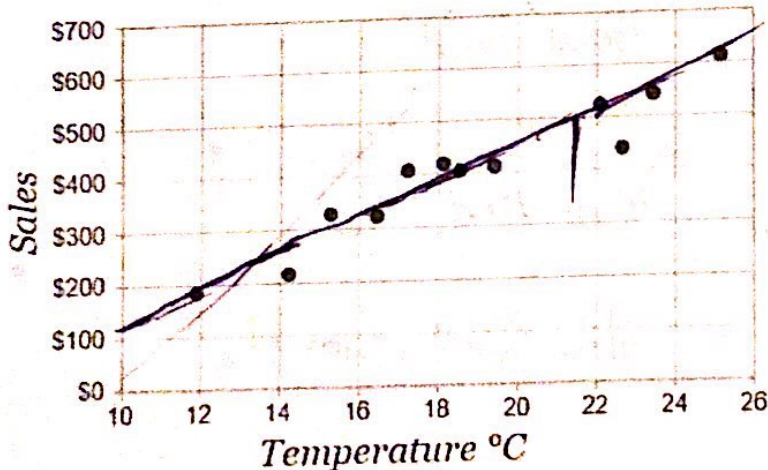


1. If a sandwich has 20 grams of fat, what is the expected number of calories?
475 calories
2. If a sandwich has 300 calories, approximately how many grams of fat does it contain?
2 grams
3. If a new sandwich has 700 calories, approximately how many grams of fat will it have?
42 grams
4. If a sandwich has 10 grams of fat, how many calories are in the sandwich?
375 calories

Describe the correlation:

As the Fat increases, the calories increase giving this graph a positive correlation. This positive correlation has a strong strength that is linear because it is best modeled by a line.

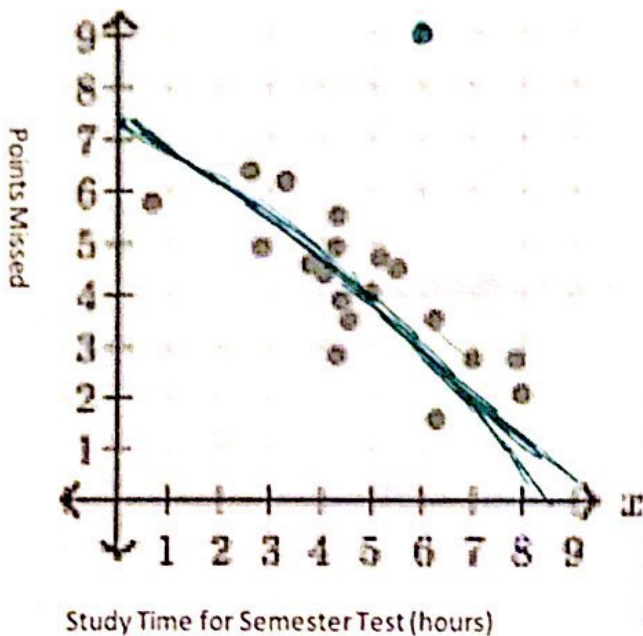
How Temperature affects the sales of ice cream



5. If there were \$500 worth of ice cream cones sold, what was the approximate temperature?
21°C
6. If it is 13°C outside today, how much can the company expect to make in sales?
\$250
7. Tomorrow's high is 17°C, what is the sales amount to expect?
\$350

Describe the correlation.

The Effect of Studying on Number of Points Lost



8. If Amanda studied for 1 hour, how many points should she expect to miss?

About 7 pts

9. Taylor only missed 3 points. How long did he probably study?

About 6 hours

10. Maggie studied for 9 hours. How many points did she miss?

About 1 pt

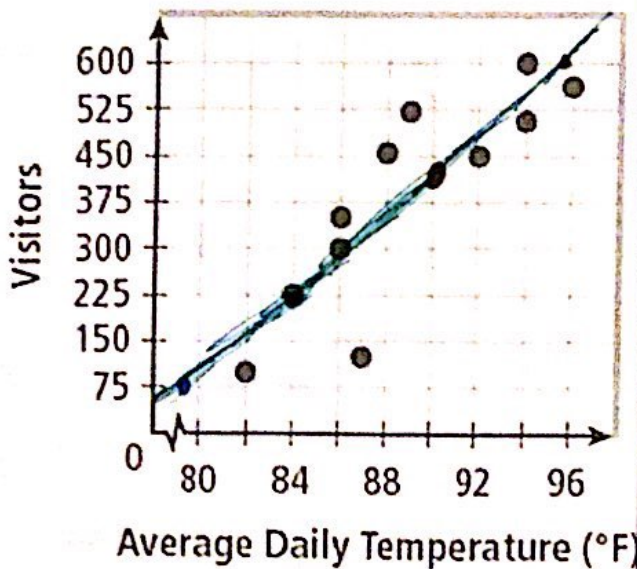
11. If Logan studied for 6 hours and missed 9 points, should you change your line? No Explain.

because it is an outlier and doesn't fit the trend

Describe the correlation:

As the study time for semester tests increases, the points missed decreases giving this graph a negative correlation. This negative correlation has a moderate strength and is linear because it is best modeled by a line.

Beach Visitors



12. If tomorrow's high is 90 degrees F, how many visitors should the life guards expect?

About 400 visitors

13. If there are only 75 people at the beach, what is the approximate temperature?

About 80°F

14. The life guards estimate there are 600 people at the beach today. What is the temperature?

About 95°F

15. How many visitors are at the beach today if it is 84 degrees outside?

About 225 visitors

Describe the correlation: