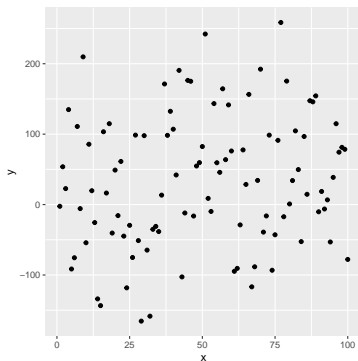
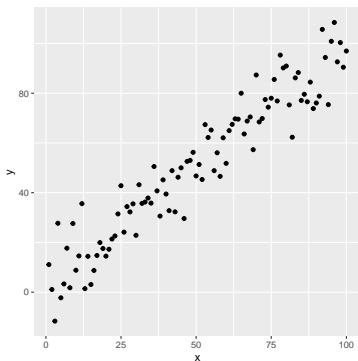


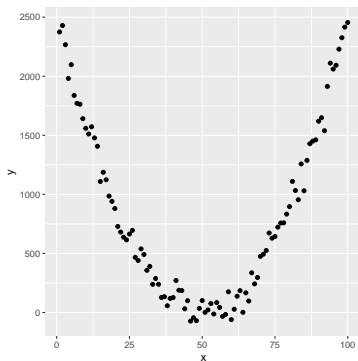
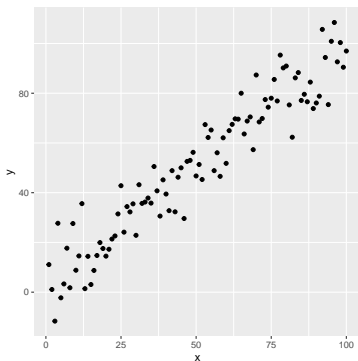
# 1. True or False?

The correlation of  $x$  and  $y$  in the scatterplot on the left is larger than the correlation of  $x$  and  $y$  in the scatterpoint on the right.



## 2. True or False?

The correlation of  $x$  and  $y$  in the scatterplot on the left is larger than the correlation of  $x$  and  $y$  in the scatterpoint on the right.



3. Suppose that, at a certain firm, men make 25% more than women do in any given position. Then the best fit line relating women's salaries to men's salaries has slope...

- (A) 0.25
- (B) 1.25
- (C) 4
- (D) None of the above

4. Suppose that, at a certain firm, men make \$5000 more than women do in any given position. Then the best fit line relating women's salaries to men's salaries has slope...

(A) 0

(B) 1

(C) 5000

(D) None of the above

Suppose we fit a regression line to predict the number of incidents of skin cancer per 1000 people from the number of sunny days in a year. For 2019, we predicted the incidence of skin cancer to be 1.5 per 1000 people, and the residual for was 0.5.

5. True or False?

The regression line overestimated the incidence of skin cancer in 2019.

6. Starbucks lists the calorie content of food menu items but not carbohydrate content. Suppose we gather data on some Starbucks food items and construct a best fit line to predict the carbohydrate content (in grams) using the calorie content. Then the slope of the best fit line has units...

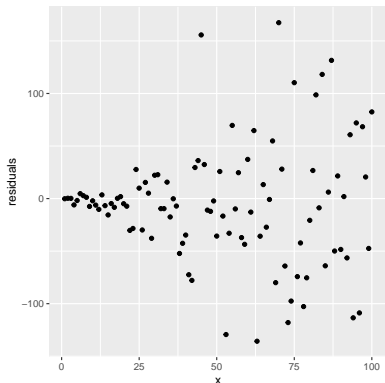
- (A) g
- (B) cal
- (C) g/cal
- (D) None of the above

**Follow-up.** Use the units to give an explicit interpretation of the slope of this line.

The plot to the right represents the *residuals* after we fit a least squares regression to some data.

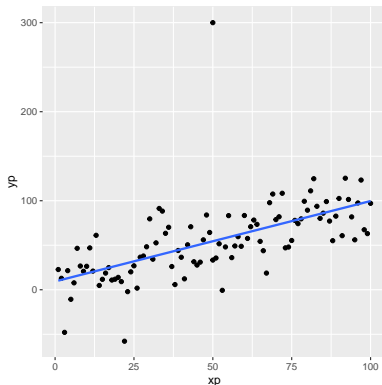
7. Should we have concerns about applying least squares regression to this data?

- (A) Yes
- (B) No
- (C) I don't know



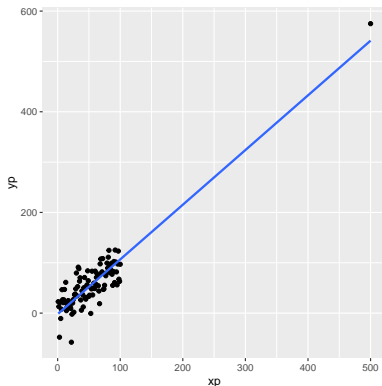
8. Which of the following is true about the depicted outlier?

- (A) It doesn't have high leverage.
- (B) It has high leverage but isn't influential.
- (C) It has high leverage and is influential.



9. Which of the following is true about the depicted outlier?

- (A) It doesn't have high leverage.
- (B) It has high leverage but isn't influential.
- (C) It has high leverage and is influential.



10. Which of the following is true about the depicted outlier?

- (A) It doesn't have high leverage.
- (B) It has high leverage but isn't influential.
- (C) It has high leverage and is influential.

