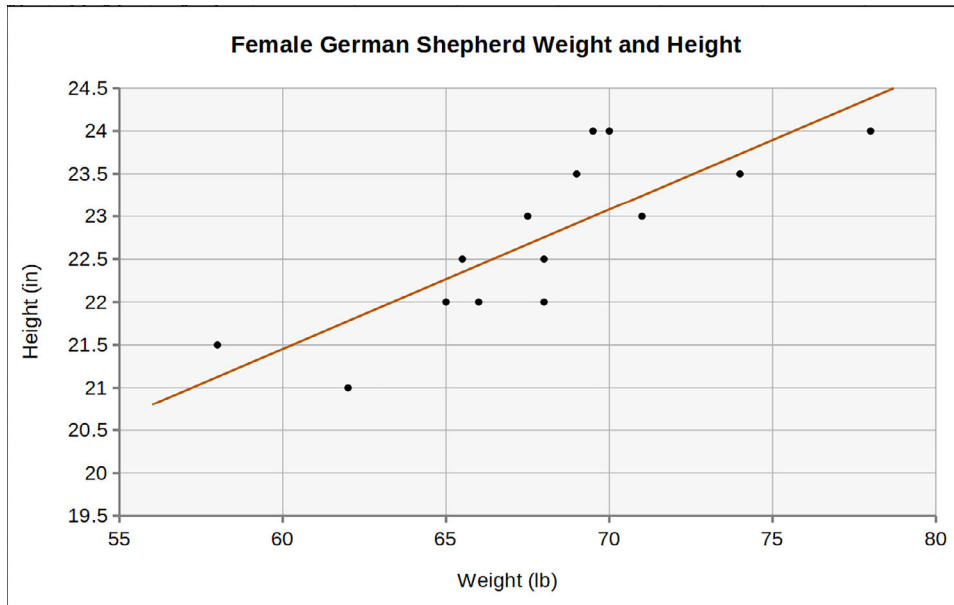3. The scatter plot below shows the weight and height of various adult female German shepherds. (It does not have to do with weight gain/loss of an individual dog — each dot signifies a different dog.) The equation for the trend line is $h = 0.16w + 11.68$, where h is the height in inches and w is the weight in pounds.

a. Which statements are correct?

- Each 0.16-lb increase in weight is associated with a 1-inch increase in height.

- Each 1-lb increase in weight is associated with a 0.16-inch increase in height.

- Heavier dogs tend to be taller; and for each 5-lb increase in the weight, the dogs tend to be 0.8 inches taller.

- The model predicts a height of 11.68 inches for a dog weighing zero pounds.

- The model predicts a weight of 11.68 lb for a dog that is zero inches tall.

- We should be careful in using this model to extrapolate the heights of dogs less than 55 pounds.

b. Use the equation to predict the weight of dog that is 22.5 inches tall, to the nearest pound.

c. Use the equation to predict how tall a 63-lb dog would be.

d. Would a dog that weighs 60 lb and is 21 inches tall be considered an outlier?

e. What is the difference between the predicted height of a 75-lb dog and its real height, if in reality it is 24 1/4 inches tall?