Question 1

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We want to find the best-fitting linear model for men's pole vault world records since 1970.

1. Create a new data frame that contains the world record cases in the men's pole vault event in years 1970 and later.

2. Use this data frame to answer the following questions.

*Use the "WorldRecords.csv" dataset to answer the following questions. Instructions for installing "WorldRecords.csv" can be found under the **Examine the Data** unit in this week's **Pre-Lab** section.*

problem

1/1 point (graded)

1a. What is the standing world record height (in meters) for men's pole vault? *(Round to 2 decimal places.)*

6.14 ✔

6.14

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problem

1/1 point (graded)

1b. In what year did the pole vault record first exceed **6 meters**? *(Look at the data to find the year.)*

1986 ✔

1986

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problem

1/1 point (graded)

1c. Create a scatterplot showing the men's pole vault records since 1970 as a function of year. Fit a linear model to the data.

Which of the following best describes how the record has changed over time?

- (•) The record pole vault height steadily increases over time. ✔
- ( ) The record pole vault height steadily decreases over time.

- The record pole vault height has a clear non-linear relationship with year.
- The record pole vault height doesn't seem to have any relationship with year.

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problem

1/1 point (graded)

Report the coefficient estimates for the linear model that describes the change in the men's pole vault world record since 1970.

1d. What is the intercept? *(Round to 3 decimal places.)*

-51.854 ✔

-51.854

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problem

1/1 point (graded)

1e. What is the slope? *(Round to 3 decimal places.)*

0.029 ✔

0.029

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problem

1/1 point (graded)

1f. Which of the following best describes how the men's pole vault world record has changed since 1970?

- The record has increased by an average of one meter every 0.03 years since 1970.
- The record has increased by an average of one meter every 0.97 years since 1970.
- The record has increased by an average of 0.03 meters per year since 1970. ✔
- The record has increased by an average of 0.97 meters per year since 1970.

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