



Bookmarks



Bookmark

- ▶ Important Pre-Course Survey
- ▶ Contact Us
- ▶ How To Navigate the Course
- ▶ Discussion Board
- ▶ Office Hours
- ▶ Week 1: Introduction to Data
- ▶ Week 2: Univariate Descriptive Statistics
- ▶ Week 3: Bivariate Distributions
- ▶ Week 4: Bivariate Distributions (Categorical Data)
- ▼ **Week 5: Linear Functions**

Readings

Reading Check due
Mar 15, 2016 at 18:00
UTC



Week 5: Linear Functions > Problem Set > Question 1

Question 1

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.*

(1/1 point)

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



Answer: 6.14

6.14*You have used 1 of 1 submissions*

(1/1 point)

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




Answer: 1986


1986*You have used 1 of 1 submissions*

(1/1 point)

Lecture Videos

Comprehension Check
due Mar 15, 2016 at
18:00 UTC 


R Tutorial Videos**Pre-Lab**

Pre-Lab due Mar 15,
2016 at 18:00 UTC 

Lab


Lab due Mar 15, 2016
at 18:00 UTC 

Problem Set

Problem Set due Mar
15, 2016 at 18:00 UTC 

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.

You have used 1 of 1 submissions

(1/1 point)

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

 Answer: -51.854

-51.854

You have used 1 of 1 submissions

(1/1 point)

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

0.029

 Answer: .029

0.029

You have used 1 of 1 submissions

(1/1 point)

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.

You have used 1 of 1 submissions

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