Primary Research Questions

1. Are some studios more successful in keeping their films in the theaters longer?
2. Do some studios earn a greater percentage of their earnings domestically than others?

Analysis

Let's break this question down into the different descriptive statistics that you will need to construct your answer. Be sure that your R output includes all of the following components.

For each lab question:

1. Identify the number of films in each studio group.

2. Find the mean and standard deviation of the variable of interest for each group.
3. Create boxplots to help visualize group differences and check test assumptions.
4. Run ANOVA.
5. If the F statistic is significant, run a Tukey HSD test to determine which groups are different.

(5/5 points)
The number of top-grossing films produced by each studio were:

1a. Fox

41 ✔

Answer: 41

41

1b. Paramount

24 ✔

Answer: 24

24

1c. Sony Pictures

Lab due May 03, 2016 at 17:00 UTC

Problem Set
Problem Set due May 03, 2016 at 17:00 UTC

19 ✔

Answer: 19

19

1d. Universal Studios

27 ✔

Answer: 27

27

1e. Warner Brothers

40 ✔

Answer: 40

40

You have used 1 of 1 submissions

(4/4 points)

Research Question 1

2a. Sony films were in studios for the shortest period of time. How many **days** were they in studios, on average? (round to 1 decimal place)

113.7 ✔

Answer: 113.7

113.7

2b. Fox films were in studios for the longest period of time. How many **days** were they in studios, on average? (round to 1 decimal place)

154.5 ✔

Answer: 154.5

154.5

ANOVA Results

2c. What was the **F statistic** for this hypothesis test? (round to 2 decimal places)

5.35 ✔

Answer: 5.35

5.35

Tukey Results

2d. We can conclude that _____ films are in theaters longer, on average, than films made by both Sony and Universal.

Fox ✔

Answer: Fox

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(4/4 points)

Research Question 2

3a. Universal films earned the **largest** percentage of earnings domestically, with a group mean of _____%. (round to 0 decimal places)

44 ✔

Answer: 44

44

3b. Sony films earned the **smallest** percentage of their earnings domestically, with a group mean of _____%. (round to 0 decimal places)

36 ✔

Answer: 36

36

ANOVA Results

3c. What was the F-statistic for this hypothesis test? (round to 1 decimal place)

2.1 ✔

Answer: 2.1

2.1

Tukey Results

3d. How many group means were significantly different from each other?

0 ✔

Answer: 0

0

You have used 1 of 1 submissions

(1/1 point)

4. Which of the following observations allow you to confirm that the distributions were nearly Normal?

- [x] The boxplots were not highly skewed.
- [ ] The standard deviations of each group were essentially equivalent.
- [ ] The films in each group were independent of each other.

You have used 1 of 1 submissions


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