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Question 1

Do low-budget movies make a different percentage of their profits domestically than movies with medium- or high-budgets?

1. Suppose films with a budget less than \$100 Million are considered "low-budget"; films with a budget of \$100-150 Million are considered "medium-budget", and those with a budget of \$150 million or more are "high-budget."
2. Create a new categorical variable in the dataset that defines each film under these criteria.
3. Use this data to answer the following questions.

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

(1 point possible)

1a. How many films fall into each of the budget categories?

High-Budget Films

Help

Answer: 42

Hide Answer

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(1 point possible)

Medium-Budget Films

Answer: 41

Hide Answer

You have used 0 of 1 submissions

(1 point possible)

Low-Budget Films

Answer: 67

Hide Answer

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(1 point possible)

1b. Calculate the **mean percent domestic** for each group and enter them below. *(Report answers as percentages rounded to one decimal place.)*

High-Budget Films

Answer: 37.6

Hide Answer

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(1 point possible)

Medium-Budget Films

Answer: 38.6

Hide Answer

You have used 0 of 1 submissions

(1 point possible)

Low-Budget Films

Answer: 44.6

Hide Answer

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Create a boxplot to check the assumptions of ANOVA. Then run an ANOVA and report your findings below.

(1 point possible)

1c. What is the **F-statistic** for this test? *(Round to 1 decimal place.)*

Answer: 7.6

Hide Answer

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(1 point possible)

1d. What are the **degrees of freedom**?

Numerator Degree of Freedom

Answer: 2

Hide Answer

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(1 point possible)

Denominator Degree of Freedom

Answer: 147


[Hide Answer](#)*You have used 0 of 1 submissions*

(1 point possible)

1e. What is the **p-value** of the test? (Round to 3 decimal places.)**Answer:** 0.001[Hide Answer](#)*You have used 0 of 1 submissions*

(1 point possible)

1f. What is the appropriate conclusion for this test?

- ☐ The mean percent gross earned domestically is equal across all budget groups.
- ☐ The mean percent gross earned domestically is NOT equal across all budget groups. 

[Hide Answer](#)*You have used 0 of 1 submissions*

(1 point possible)

1g. Run a **Tukey HSD post-hoc** analysis and chose the correct adjusted p-values for each pairwise comparison listed below

Low vs. High

 0.002

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(1 point possible)

Low vs. Medium

 0.010

Hide Answer

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(1 point possible)

Medium vs. High

 0.898

Hide Answer

You have used 0 of 1 submissions

(1 point possible)

1h. What is the appropriate conclusion for the post-hoc analysis?

Help

- ☐ Both low-budget and medium-budget films earn a greater percentage of their profit domestically than high-budget films.
- ☐ High-budget films earn a greater percentage of their profit domestically than either low-budget or high-budget films.
- ☐ Medium-budget films earn the most percentage of their profit domestically.
- ☐ Low-budget films earn a greater percentage of their profit domestically than either medium-budget or high-budget films. ✓



[Hide Answer](#)*You have used 0 of 1 submissions*

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