

# Data Analysis Skills Review — TIPS Dataset

Small quiz based on the tips dataset

## Dataset Tips — EDA

This is a short quiz to review your existing data exploration skills. This does not contribute towards CA (either student engagement or assessment), and is only intended to identify what people know before the module starts.

Note on entering numerical answers: When entering a numerical answer to questions be mindful of:

Percentages should be entered as decimals, for example to enter 34.2% use 0.342

Floating point numerical answers have a required accuracy. This is typically stated as the number of correct — after rounding — digits after the decimal point (abbreviated to DP).

For example, if the answer to a question was 265.15765054700429743 and you were asked to be accurate to 2DP then as long as your answer has at least two digits after the decimal point correct then the answer is correct.

### Question 1:

What is the total of tips (to 2DP)?

### Question 2:

What is the average (mean) of total\_bill (to 2DP)?

### Question 3:

What is the standard deviation of total\_bill (to 2DP)?

### Question 4:

What is the range of total\_bill (to 2DP)?

### Question 5:

What is the interquartile range (IQR) of total\_bill (to 2DP)?

### Question 6:

Using the “1.5\*IQR from the Q1 and Q3 quartiles” rule, how many outlier observations are in total\_bill?

### Question 7:

Classify the total\_bill distribution as

- Left-skewed
- Symmetric
- Right-skewed

### Question 8:

What is the average number of bills per day (to 1DP)?

### Question 9:

How many days had more than 60 bills?

**Question 10:**

What is the average percentage tip for male servers (enter answer as a decimal to 2DP)?

**Question 11:**

What is the average percentage tip for male servers (enter answer as a decimal to 2DP)?

**Question 12:**

Which group size gives the smallest percentage tip on average?

**Question 13:**

What is the max percentage tip for female servers over the weekend (Sat or Sut) (enter answer as a decimal to 2DP)?

**Question 14:**

Picking a bill at random, what is the probability that the server is female (enter answer as a decimal to 2DP)?

**Question 15:**

Picking a bill at random, what is the probability that the server is female given that the day was Sunday (enter answer as a decimal to 2DP)?

**Question 16:**

Which meal time has the greater mean tips?

- Lunch
- Dinner

**Question 17:**

Which meal time has the greater mean tips?

- Lunch
- Dinner

**Question 18:**

True or False:

“Despite female servers having higher average percentage tips, it is male servers who earn the largest percentage tips”

- True
- False

**Question 19:**

True or False:

“Despite female servers having higher average percentage tips, it is male servers who earn the largest percentage tips”

- True
- False

**Question 20:**

Which day is the busiest (in terms of number of meals served)?

- Sun
- Fri
- Sat
- Thur

**Question 21:**

Which day is the busiest (in terms of number of meals served)?

- Sat
- Fri
- Thur
- Sun