✓ **Congratulations! You passed!**
TO PASS 80% or higher

GRADE
100%

Weekly challenge 5

LATEST SUBMISSION GRADE

100%

1. An online gardening magazine wants to understand why its subscriber numbers have been increasing. What kind of reports can a data analyst provide to help answer that question? Select all that apply.

1 / 1 point

☐ Reports that predict the success of sales leads to secure future subscribers

☑ Reports that describe how many customers shared positive comments about the gardening magazine on social media in the past year

> ✓ **Correct**
> Analyzing historical data such as weather patterns, social media comments, and past sales would provide useful insights into the increase in subscription numbers.

☑ Reports that compare past weather patterns to the number of people asking gardening questions to their social media

> ✓ **Correct**
> Analyzing historical data such as weather patterns, social media comments, and past sales would provide useful insights into the increase in subscription numbers.

☑ Reports that examine how a recent 50%-off sale affected the number of subscription purchases

> ✓ **Correct**
> Analyzing historical data such as weather patterns, social media comments, and past sales would provide useful insights into the increase in subscription numbers.

2. A doctor's office discovers that patients are waiting 20 minutes longer for their appointments than in past years. In what ways could a data analyst help solve this problem? Select all that apply.

1 / 1 point

☐ Analyze a recent change in the average rating for the doctor's office on social media.

☑ Analyze the average length of an appointment this year compared to past years.

> ✓ **Correct**
> Analyzing appointment length, staffing numbers, and patient numbers are likely to provide useful insights to illustrate why this is happening and help solve this problem.

☑ Analyze the number of patients seen per day compared to past years.

> ✓ **Correct**
> Analyzing appointment length, staffing numbers, and patient numbers are likely to provide useful insights to illustrate why this is happening and help solve this problem.

☑ Analyze how many doctors and nurses are on staff at a given time compared to the number of patients with appointments.

> ✓ **Correct**
> Analyzing appointment length, staffing numbers, and patient numbers are likely to provide useful insights to illustrate why this is happening and help solve this problem.

3. Describe the difference between a question and a problem in data analytics.

1 / 1 point

○ A question can have many answers, whereas a problem only has one solution.

○ A question is a topic to investigate, whereas a problem is a subject to investigate.

○ A question is uncertain, whereas a problem is clearly specified.

◉ A question is designed to discover information, whereas a problem is an obstacle or complication that needs to be solved.

✓ **Correct**
A question is designed to discover information, whereas a problem is an obstacle or complication to be solved. These two things are the foundation of business tasks.

4. Fill in the blank: A business task is described as the problem or _____ a data analyst answers for a business.

1 / 1 point

○ comment

○ complaint

◉ question

○ solution

✓ **Correct**
A business task is described as the problem or question a data analyst answers for a business.

5. What is the process of using facts to guide business strategy?

1 / 1 point

○ Data visualization

◉ Data-driven decision-making

○ Data programming

○ Data ethics

✓ **Correct**
Data-driven decision-making is using facts to guide business strategy.

6. Which of the following examples describe fairness in data analysis? Select all that apply.

1 / 1 point

☑ Making sure a sample population represents all groups

✓ **Correct**
Considering systematic factors that may influence your data, factoring in social contexts that could create bias in your conclusions, and making sure your sample population represents all groups are effective ways to ensure that your analysis is fair and doesn't create or reinforce bias.

☐ Picking and choosing which data to include from a dataset

☑ Considering systematic factors that may influence data

✓ **Correct**
Considering systematic factors that may influence your data, factoring in social contexts that could create bias in your conclusions, and making sure your sample population represents all groups are effective ways to ensure that your analysis is fair and doesn't create or reinforce bias.

☑ Factoring in social contexts that could create bias in conclusions

✓ **Correct**

Considering systematic factors that may influence your data, factoring in social contexts that could create bias in your conclusions, and making sure your sample population represents all groups are effective ways to ensure that your analysis is fair and doesn't create or reinforce bias.

7. Fill in the blank: Fairness is achieved when data analysis doesn't create or _____ bias.   **1 / 1 point**

- ⦿ reinforce
- ◯ resolve
- ◯ constrain
- ◯ highlight

✓ **Correct**

Fairness is achieved when data analysis doesn't create or reinforce bias.

8. A large hotel chain sees about 500 customers per week. A data analyst working there is gathering data through customer satisfaction surveys. They are anxious to begin analysis, so they start analyzing the data as soon as they receive 50 survey responses. This is an example of what? Select all that apply.   **1 / 1 point**

- ☐ Failing to reward customers for participating in the survey
- ☑ Failing to include diverse perspectives in data collection

✓ **Correct**

This is an example of failing to include diverse perspectives and failing to have a large enough sample size. The first 50 survey responses are unlikely to represent the general population and may produce biased results.

- ☑ Failing to have a large enough sample size

✓ **Correct**

This is an example of failing to include diverse perspectives and failing to have a large enough sample size. The first 50 survey responses are unlikely to represent the general population and may produce biased results.

- ☐ Failing to collect data anonymously