

# Lesson 1 Homework Practice

## Make Predictions

**QUIZ SHOW** For Exercises 1 and 2, use the following information. On a quiz show, a contestant correctly answered 9 of the last 12 questions.

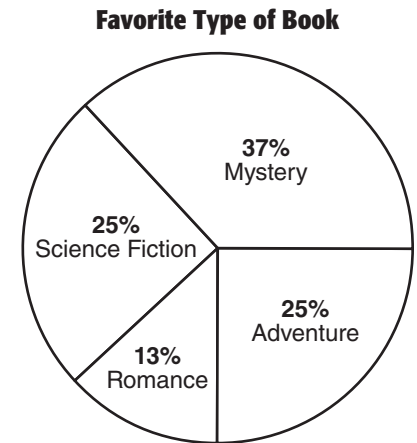
- Based on these results, find the probability of the contestant correctly answering the next question.
- Suppose the contestant continues on the show and tries to correctly answer 24 questions. About how many questions would you predict the contestant to correctly answer?

**CHORES** For Exercises 3–6, use the table to predict the number of students out of 528 that would say each of the following was their least favorite chore.

| Least Favorite Chore |                    |
|----------------------|--------------------|
| Chore                | Number of Students |
| Clean my room        | 7                  |
| Take out the garbage | 4                  |
| Wash dishes          | 5                  |
| Walk the dog         | 3                  |
| Vacuum or dust       | 5                  |

- clean my room
- wash dishes
- walk the dog
- take out the garbage

- 7. BOOK** The results of a survey asking teens their favorite type of book to read is shown.
- Out of 250 teens, predict how many would choose mystery as their favorite type of book to read.
  - Out of 250 teens, predict how many would choose adventure as their favorite type of book to read.
  - Out of 250 teens, predict how many would choose science fiction as their favorite type of book to read.



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## Lesson 2 Homework Practice

### *Unbiased and Biased Samples*

**Determine if each conclusion is valid. Justify your answer.**

- To determine the most common injury cared for in an emergency room, a reporter goes to the same hospital every afternoon for one month during the summer and observes people entering the emergency room. She concludes that second degree sunburn is the most common injury.
- To evaluate customer satisfaction, a grocery store gives double coupons to anyone who completes a survey as they enter the store. The store manager determines that customers are very satisfied with their shopping experience in his store.
- To evaluate the integrity of underground water lines, the department of public works randomly selects 20 sites in the city to unearth and observe the water lines. At 5 of the sites, the water lines needed repair. The department of public works concludes that about one-fourth of underground water lines throughout the city need repair.

- DOWNLOADS** A guidance counselor asked students who owned mobile phones, which was the last type of download each one downloaded to their mobile phone. The results are shown in the table. If there are 420 students in the school, how many can be expected to download ringtones?

| Mobile Phone Downloads |           |
|------------------------|-----------|
| Type                   | Frequency |
| Games                  | 10        |
| Ringtones              | 25        |
| Screensavers           | 14        |
| Music                  | 36        |

- DENTISTRY** A survey is to be conducted to determine the reasons dental patients are hesitant to go to the dentist. Describe the sample and explain why each sampling method might not be valid.
  - Adults that are randomly selected from an office complex are asked to go online and fill out a questionnaire.
  - A randomly selected dentist asks his patients why they may be hesitant to go to a dentist.
  - Randomly selected dental patients who are having a routine check-up are asked to write down their feelings.

# Lesson 3 Homework Practice

## Misleading Graphs and Statistics

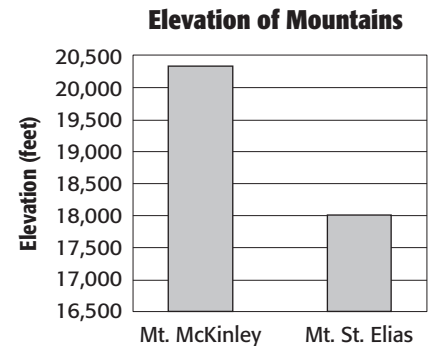
**ANTIQUES** For Exercises 1–3, use the table.

- Find the mean, median, and mode of the data.
- Which measure might be misleading in describing the value of each item? Explain.
- Which measure would best describe the value of each item? Explain.

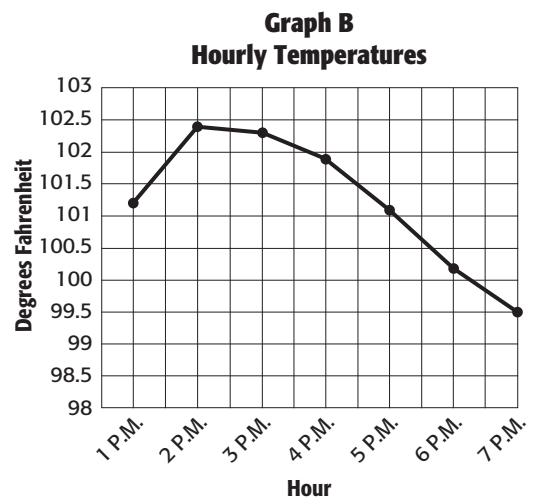
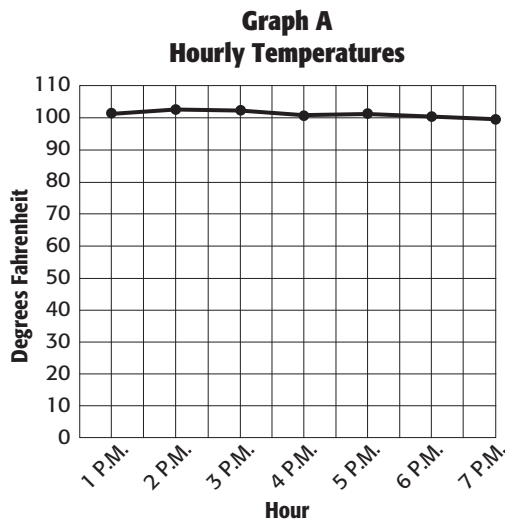
| Antiques       |            |
|----------------|------------|
| Item           | Value (\$) |
| Desk           | 150        |
| Table          | 850        |
| Painting       | 850        |
| Dishes         | 750        |
| Sewing Machine | 200        |

**MOUNTAINS** For Exercises 4 and 5, use the graph that shows the elevation of the two highest mountain peaks in Alaska.

- Based on the size of the bars compare the elevations of the mountains.
- Explain how this graph may be misleading.



- BODY TEMPERATURE** The graphs below show the hourly body temperature for a hospital patient. Which graph would be more helpful to the doctor in showing the change in body temperature? Explain.



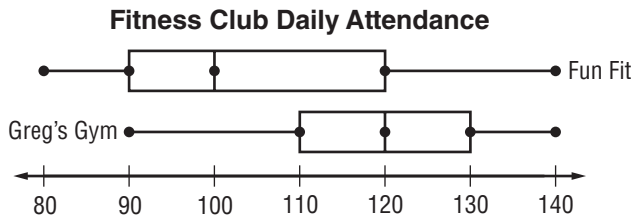
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# Lesson 4 Homework Practice

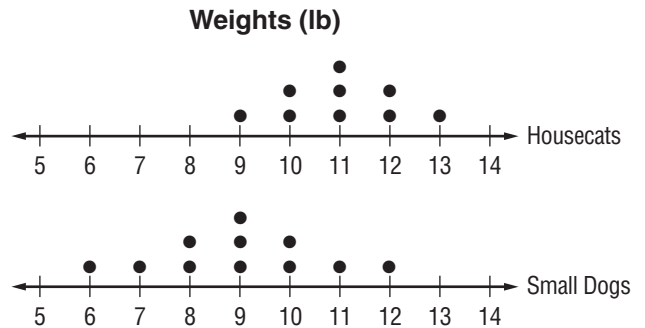
## Compare Populations

Compare the centers and variations of the two populations in each exercise. Round to the nearest tenth if necessary. Write an inference you can draw about the two populations.

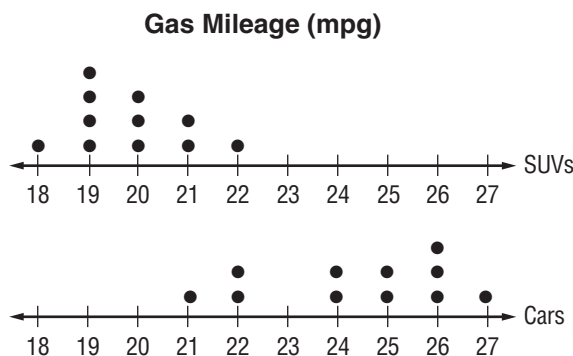
1. **FITNESS** The double plot shows the daily attendance for two fitness clubs for one month.



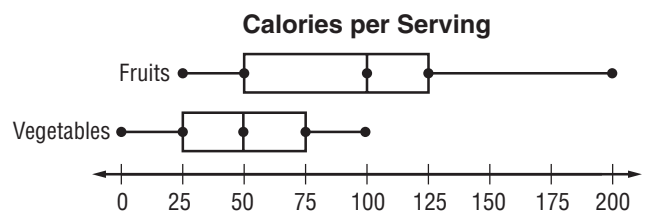
2. **ANIMALS** The double dot plot shows the weights in pounds of several housecats and small dogs.



3. **GAS MILEAGE** The double dot plot shows the gas mileage, in miles per gallon, for several cars and SUVs.



4. **NUTRITION** The double box plot shows the number of Calories per serving for various fruits and vegetables.



## Lesson 5 Homework Practice

### Select an Appropriate Display

Select an appropriate type of display for each situation. Justify your reasoning.

1. the numbers of students who spend Sundays doing homework, visiting with friends, and/or working
2. the number of each of four types of flowers found in a garden
3. prices of scuba gear in a store arranged by intervals
4. the spread of times for boaters completing a yacht race

Select an appropriate type of display for each situation. Justify your reasoning. Then construct the display. What can you conclude from your display?

5.

| Number of Miles of Gulf Coastline |       |
|-----------------------------------|-------|
| State                             | Miles |
| Alabama                           | 53    |
| Florida                           | 770   |
| Louisiana                         | 397   |
| Mississippi                       | 44    |
| Texas                             | 367   |

6. **FLUTE** Tobey practiced the flute for 15 minutes on Monday. On Tuesday, he practiced 15 more minutes than he did on Monday. On Wednesday, he practiced 15 more minutes than he did on Tuesday. The pattern continued through Saturday.