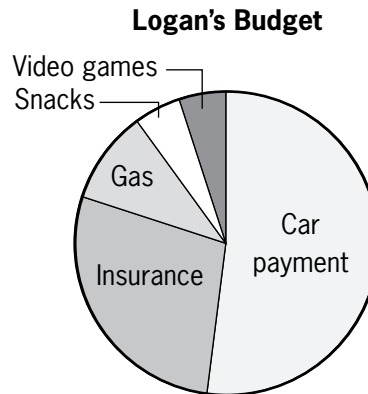


NAME _____

Module 19 Analyzing Data and Statistics
Lesson 2 Interpreting Graphs of Data

independent practice

Use the graph below to answer Questions 1–3.



1. What single expense accounts for approximately 50% of Logan's budget?

Car payment

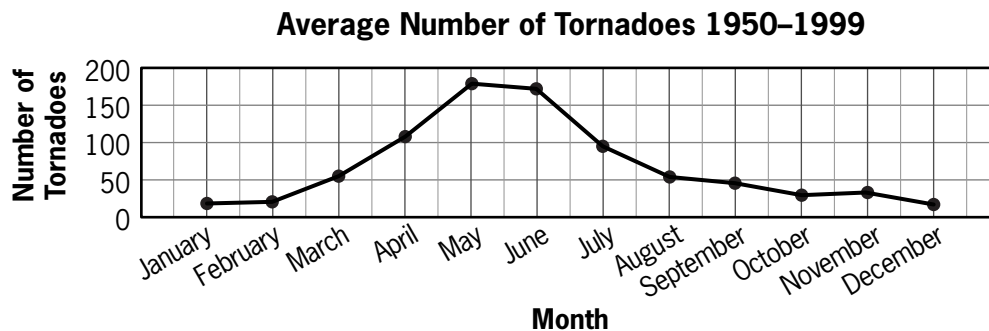
2. On which two categories does Logan spend approximately the same amount?

Snacks and video games

3. About what percent of Logan's money was spent on either gas or insurance?

About 33%

Use the graph below to answer Questions 4–6.



4. What trends are displayed on the graph?

The graph increases from January to May, remains fairly level through June, and decreases from June to December.

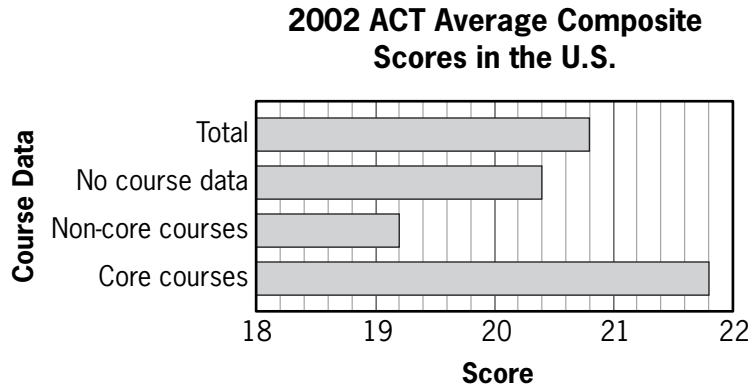
5. Which month has the greatest number of tornadoes?

May

6. Which season has the least number of tornadoes?

Winter

Use the graph below to answer Questions 7–9.



7. What category of students had the highest average ACT score?

Those who took core courses

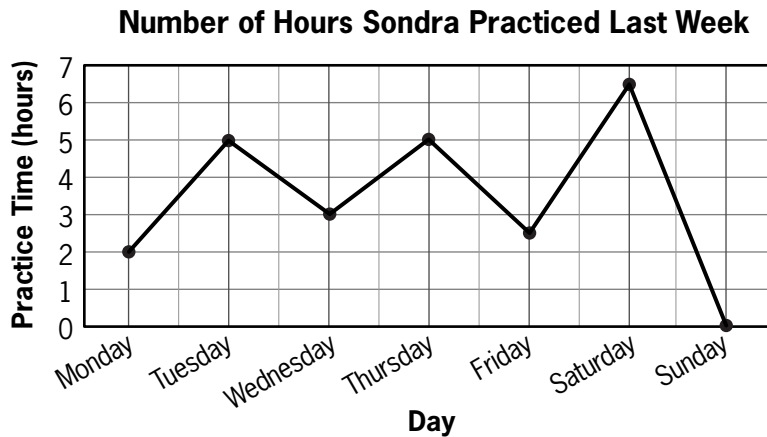
8. What is the highest mean ACT score shown?

21.8 points

9. What is the difference in scores between core-course completers and non-core course completers?

2.6 points

Use the graph below to answer Questions 10–12.



10. What was the greatest number of hours Sondra spent practicing in one day?

6.5 hours

11. What days did Sondra practice the same number of hours?

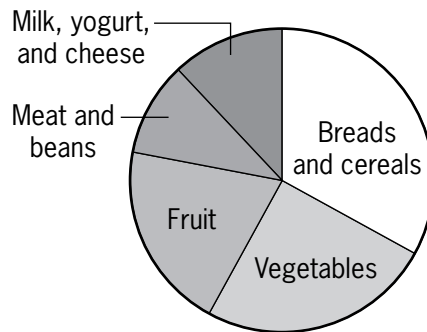
Tuesday and Thursday

12. What trend is shown by the line graph?

Sondra practiced longer periods of time every other day. She did not practice at all on Sunday.

Use the graph below to answer Questions 13–15.

**Daily Servings Needed Daily
by a Teenage Girl**



13. About what percent of a teenage girl's diet should be composed of fruits and vegetables?

45%

14. From which food group should a teenaged girl eat the most servings?

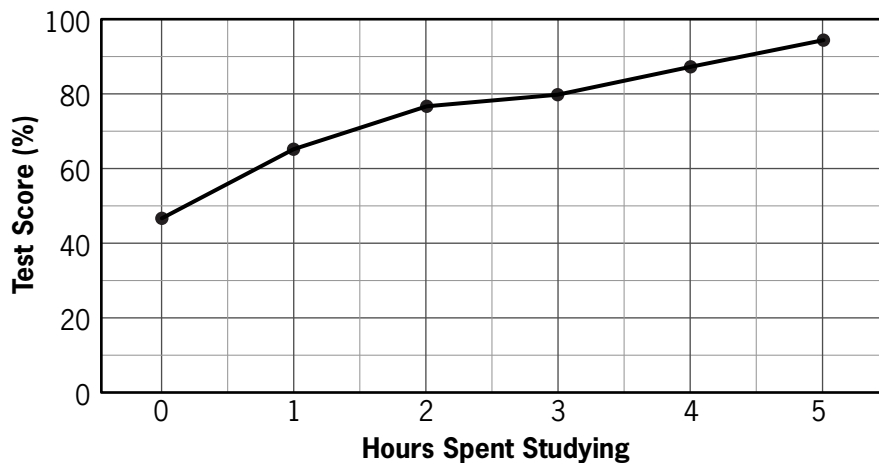
Breads and cereals

15. How many servings should come from the bread and cereals group if there are 21 total servings in a day?

Seven servings

Use the graph below to answer Questions 16–18.

Roger's Algebra Test Scores



16. What is the trend of Roger's test scores?

As the time Roger studies increases, his test scores increase.

17. What was Roger's test score when he studied three hours?

80%

18. How many hours should Roger study to make at least an 80%?

Three hours

Journal

1. What information is provided by a pie chart, a line graph, and a bar graph?
2. Margie wants to study hair style length trends of the students at her school from 1993–2003. What kind of graph should she use and why?
3. Brady is looking for an after-school job. What kind of graph can he use to help determine the number of hours he is available for work and to help him budget his time? Why should he use this type of graph?
4. Shane and Susan are arguing over who has made the most A's from kindergarten to ninth grade. What kind of graph could they use to compare the number of A's for each year? Why would this be the best graph to use?
5. Explain how a pie chart could be used to show that Jim spends 75% of his income on his car. **Possible Journal Answers**

1. A pie chart shows parts to a whole. A line graph shows trends, and a bar graph shows comparisons.

2. Margie should use a line graph because she is trying to find trends.

3. Brady should use a pie chart, so he can compare how he uses each individual part of his day to the total amount of time he has in a day.

Cumulative Review

Use the data set below for Problems 1–4.

4. Shane and Susan should use a bar graph because a bar graph shows comparisons.

Number of students in each class: 22, 28, 30, 18, 27, 28, 23, 28, 21, 24

1. Make a stem-and-leaf plot.

```

1 | 8
2 | 1 2 3 4 7 8 8 8   1|8 = 18
3 | 0
  
```

2. Find the mean. 24.9 students

3. Find the median. 25.5 students

4. Find the mode. 28 students

Use the data below to answer Problems 5–9. Round answers to the nearest tenth.

Number of moons of each planet in the solar system: 0, 0, 1, 2, 60, 31, 21, 8, 1

5. Make a stem-and-leaf plot.

```

0 | 0 0 1 1 2 8
1 |
2 | 1
3 | 1           1|3 = 13
4 |
5 |
6 | 0
  
```

6. Find the mean. 13.8

7. Find the median. Two moons

8. Find the mode. Zero moons and one moon

9. Which value gives the best average for the set of data? Why?

10. Find a set of seven different numbers whose mean is 10.

Either median or mean is acceptable with sufficient explanation.

Sample answer: 7, 8, 9, 10, 11, 12, 13

Possible Journal Answers (continued)

5. The pie chart would have one slice of 270° to represent the amount Jim spends on his car and another slice of 90° to represent Jim's other expenditures.