LESSON 7-4

Problem Solving

Reading and Interpreting Circle Graphs

Write the correct answer.

1. A market research group conducted a survey of 100 sports car owners. The group learned that 50% of the car owners loved their cars. What part of the circle in a circle graph would be represented by that statistic?

   $\frac{1}{2}$ of the circle

2. Juanita has 100 CDs. In her collection, 37 of the CDs are rock music, 25 are jazz, and 38 are country music. What part of the circle in a circle graph would represent the jazz CDs?

   $\frac{1}{4}$ of the circle

3. Mr. Martin wanted to compare his monthly rent to his total income. Should he use a circle graph or a bar graph?

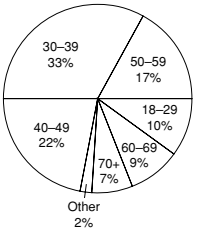
   circle graph

4. Mr. Martin's rent has increased every year for the last 6 years. Should he use a circle graph or bar graph to show the yearly increase?

   bar graph

Choose the letter for the best answer. Use the circle graph.

Age of Fitness Club Members



5. To which age group do most of the fitness club members belong?

   A 18–20 **C** 30–39 ✓
   B 70+ **D** 40–49

6. There are 100 members in a fitness club. How many members does the graph suggest will be between the ages of 18 and 39?

   F 10 **H** 43 ✓
   G 33 **J** 22

7. Which 2 age groups make up more than one-half the members?

   A 18–29 and 30–39
   B 30–39 and 40–49 ✓
   C 40–49 and 50–59
   D 18–29 and 70+

8. Which 2 age groups make up 3 times as many members as those who are between 60 and 69?

   F 40–49 and 50–59
   G 50–59 and 70+
   H 30–39 and 18–29
   J 18–29 and 50–59 ✓

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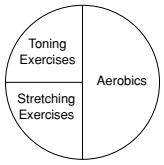
LESSON 7-4

Reading Strategies

Reading a Graph

This **circle graph** gives you the whole picture of Molly's 60-minute exercise program. You can see how each part of her exercise program relates to the whole program.

Molly's 60-Minute Exercise Program



Answer the questions about the circle graph.

1. What does the graph show?

   Molly's 60-minute exercise program

2. On which activity does Molly spend half of her time?

   aerobics

3. How do you know?

   Half of the circle is labeled "aerobics."

4. On which two activities does Molly spend the same amount of time?

   toning exercises and stretching exercises

5. How do you know?

   They are equal sections of the circle.

You can figure out how many minutes Molly spends doing each activity by looking at the graph.

6. What is the total number of minutes Molly spends doing her full exercise program? 60 minutes

7. How many minutes does Molly spend doing aerobics? (She spends one-half of her exercise program doing aerobics.) 30 minutes

8. How many minutes does Molly spend doing stretching exercises? (She spends one-fourth of her time stretching.) 15 minutes

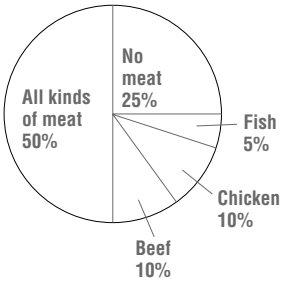
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LESSON 7-4

Puzzles, Twisters & Teasers

Cow-abunga!

Doctor Digby did a study of people's eating habits. He asked 100 people what kinds of meat they prefer. Fifty people said they like all kinds of meat. Twenty-five people said they don't like any kind of meat. Five people said they prefer fish. Ten people said they prefer chicken. Ten people said they prefer beef. Show the results of Doctor Digby's study as a circle graph using the empty circle below.



Use the key to answer the riddle: 5% = E 10% = D 25% = R 50% = U

Why did the cow cross the road?

To get to the

U	D	D	E	R
50%	10%	10%	5%	25%

side.

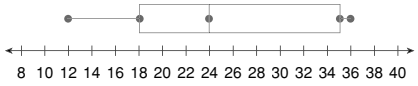
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LESSON 7-5

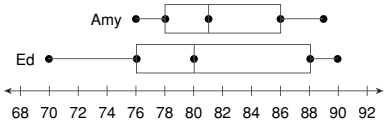
Practice A

Box-and-Whisker Plots

1. Use the data to make a box-and-whisker plot.
   24, 32, 35, 18, 20, 36, 12



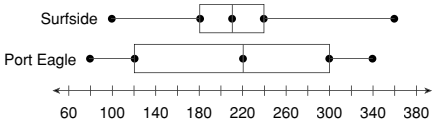
The box-and-whisker plot shows the test scores of two students. Use the box-and whisker plot for Exercises 2-4.



2. Which student has the greater median test score? Amy
3. Which student has the greater interquartile range of test scores? Ed
4. Which student has the greater range of test scores? Ed
5. Which student appears to have more predictable test scores? Explain your answer.

   Amy; Possible answer: The range and interquartile range are smaller for Amy than for Ed, so Amy's test scores are more predictable.

The box-and-whisker plot shows prices of hotel rooms in two beach towns. Use the box-and whisker plot for Exercises 6-8.



6. Which town has the greater median room price? Port Eagle
7. Which town has the greater interquartile range of room prices? Port Eagle
8. Which town appears to have more predictable room prices? Explain your answer.

   Surfside; Possible answer: The interquartile range is smaller for Surfside than for Port Eagle, so Surfside's room prices are more predictable.

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