Name _____ Date _____

Homework Practice

Percents and Fractions

Write each percent as a fraction or mixed number in simplest form.

1. 22% _____
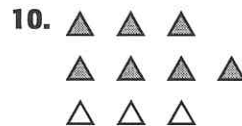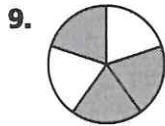
2. 7% _____

3. 146% _____

4. 465% _____

Write each fraction or mixed number as a percent.

5. $\frac{8}{10}$ _____

6. $\frac{5}{20}$ _____

7. $1\frac{4}{5}$ _____

8. $2\frac{2}{5}$ _____

Write a percent to represent the shaded portion of each model.

9.

10.

_____   _____

Spiral Review

Use the following information for exercises 11–13.   (Lesson 8–8)

A squirrel eats at the rate of 2 pounds of acorns each day.

11. Make a table to show the relationship between the number of pounds of acorns eaten, *a,* by a squirrel in *d* days.

12. Write an equation to find *a,* the number of pounds of acorns a squirrel eats in *d* days .

_____

13. How many pounds of acorns will a squirrel eat in 7 days?

_____

Name _____ Date _____

Problem-Solving Practice

Percents and Fractions

Solve.

1. The shaded part shows the percent of Tina's class who are left-handed. Write the percent.

   _____
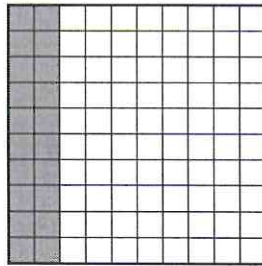
2. In William's school, 60% of the students are girls. Write 60% as a fraction in simplest form.

   _____

3. Edward found that $\frac{35}{100}$ of the students in his school bring their own lunch to school. Write this fraction as a percent.

   _____

4. Lindsey drew a 10-by-10 grid and colored 42 squares red. She colored the rest of the squares green. What percent of the grid is colored red?

   _____

   What percent is colored green?

   _____

5. Kory used yellow, green, blue, and red markers to color all the squares of a 10-by-10 grid. He colored 12 squares blue, then colored twice as many red. There are three times as many red squares as yellow squares. If the rest of the squares are green, is more than half the grid colored green? What percent of the grid is not colored yellow or green?

   _____

6. Linda is making a design using a 10-by-10 grid. She drew stars in 50% of the squares. In half of the remaining squares, she drew triangles. Half the squares containing stars were colored yellow. What fraction of the grid is not colored and does contain a star or triangle?

   _____

Name _____ Date _____

Homework Practice

Circle Graphs

1. Sketch a circle graph beside the table that shows the number of students who went on the following field trips.

Field Trip Location	Percent of Students
Aquarium	27
Museum	19
Science Center	9
Zoo	15
Water Park	18
Mountain Hike	12

2. Which field trip location had the most students?

_____

3. Which two field trips made up about half of the total students?

_____

Spiral Review

Write each percent as a fraction or mixed number. (Lesson 9–1)

4. 15% _____

5. 117% _____

Write each fraction or mixed number as a percent.

6. $\frac{3}{20}$ _____

7. $\frac{70}{100}$ _____

Name _____ Date _____

Problem-Solving Practice

5SDAP1.2, 5SDAP1.3

Circle Graphs

Solve.

1. Luis drew a circle graph of the food types he likes best. If fruit makes up 40% of the graph, fruit makes up what fraction of his favorite foods?

   _____

2. Casey found out that chocolate ice cream is preferred by 12% of the students in his class. About what fraction of a circle graph would be used for chocolate ice cream on a circle graph that shows favorite ice cream flavors?

   _____

3. Randy knows that 36% of the adults in his neighborhood work in a nearby city. About what fraction of a circle graph would show adults who work in a nearby city?

   _____

4. Kathy works at a fast-food restaurant. Twenty-five percent of the food they sell is hamburgers, 35% is chicken, 18% is French fries, and the remainder is salads. About what fraction of a circle graph would represent the salads sold?

   _____

5. Stacy took a test that included 10 multiple-choice questions, 12 true-false questions, 14 short-answer questions, and 4 essay questions. If she used a circle graph to show the question types on the test, about what part of the circle graph would represent the number of short-answer questions?

   _____

6. Heather looked at a circle graph that showed age groups of the people in her small town. On the graph 17% is used for ages 0 to 4, 14% for ages 5 to 12, 20% for ages 13 to 20, 22% for ages 21 to 50, and 12% for ages 51 to 65. The remainder of the graph represents people who are older than 65. What percent of the people in her town are older than 65?

   _____

Name _____ Date _____

Homework Practice

Percents and Decimals

Write each percent as a decimal.

1. 23% _____

2. 37% _____

3. 3% _____

4. 105% _____

Write each decimal as a percent.

5. 0.7 _____

6. 0.44 _____

7. 0.64 _____

8. 1.08 _____

Fill in each circle with <, >, or = to make a true sentence.

9. 3.4 ◯ 341% _____

10. 0.2 ◯ 18% _____

Spiral Review

For Exercises 11–12, use the graph below. (Lesson 9–2)

Favorite Family Sports

In-line skating 35%
Cycling 25%
Bowling 40%
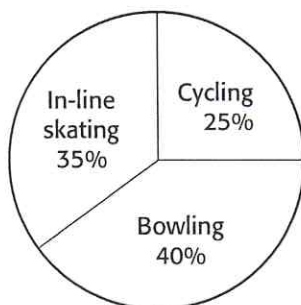
11. The circle graph shows favorite family sports. What percent of the families prefer in-line skating or cycling?

_____

12. What percent of the families prefer bowling?

_____

Name _____ Date _____

Problem-Solving Practice

Percents and Decimals

Solve.

1. The Park High Panthers won 25% of their basketball games this year. Write the percent as a fraction in simplest form.

   _____

2. In Culver City, 45% of the roads need repair. Write the percent as a decimal.

   _____

3. In Joseph's neighborhood, 32% of the homes have the local newspaper delivered. Write the percent as a decimal and as a fraction in simplest form.

   _____

4. George has read 18 of the 50 books in his bookcase. What percent of the books has George read? Write the percent as a decimal and as a fraction in simplest form.

   _____

5. Mr. Simons gave his history students three quizzes. On the first quiz, Ryan got 12 of the 15 questions correct. On the second quiz, he got 15 of the 20 questions correct, and on the third, 21 of 25 questions were correct. On which quiz did he score the highest percent?

   _____

6. The Raiders won 8 of their football games this season. They played a total of 12 games, and had the same number of losses as ties. The Spartans won 10 of their 15 games, and had one less tie than loss. Which team had the higher percent of games lost?

   _____

Name _____ Date _____

Homework Practice

Problem-Solving Strategy

Solve. Use the *solve a simpler problem* strategy.

1. Sawa spent $28.95 on her meal, and she wanted to leave a 15% tip. If she paid $35.00 and received $1.71 back in change, how much did she leave for a tip? If she left a 20% tip and paid $35.00, how much change would she get back?

_____

2. Sam has a piece of string 40 inches long. He needs to cut it into 4-inch long pieces. How many cuts will he make if he uses all 40 inches?

_____

3.

Bus Line

Route	Number of Passengers
Northeast	2,800
Northwest	2,300
North	2,400

There are 3 routes on the bus line. About how many total passengers are there? Which route is the most traveled?

_____

Spiral Review

Write each percent as a decimal. (Lesson 9–3)

4. 45% _____

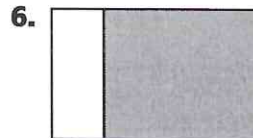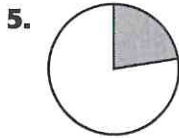5. 32% _____

6. 164% _____

Name _____ Date _____

Homework Practice

5MR2.2, 5NS2.5

Estimating with Percents

Estimate each percent.

1. 32% of 99 _____

2. 23% of 149 _____

3. 9% of 248 _____

4. 49% of 202 _____

Estimate the percent that is shaded.

5.

6.

_____

_____

7. If you see a hat on sale for 45% off, and the hat is $24.99, estimate the sale price.

_____

Spiral Review

Solve. Use the *solve a simpler problem* strategy. (Lesson 9–4)

8. If your dog needs to be walked 5 times a day, how many times does it need to be walked in a week?

_____

9. Jamie's mom wants to leave a 25% tip for a $38.50 restaurant bill. About how much money should she leave?

_____

Name _____ Date _____

Problem-Solving Practice

5MR2.2, 5NS2.5

Estimating with Percents

Estimate each shaded area and write your answer as a percent.

1.

_____

2.

_____
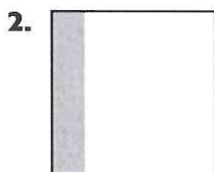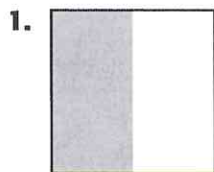
Estimate.

3. Savannah wants to save 30% of her allowance. If her allowance is $35 a month, about how much should she save per month?

_____

4. According to a recent survey, about 42% of kids say they don't get enough sleep. Out of a school with 978 kids, predict the number who would say they do get enough sleep.

_____

5. There are about 10 percent more boys born for every girl born in the world. Predict the number of boys that will be born if the number of girls born is 98,877.

_____

6. You buy a jacket that is priced at $125. It is on sale for 45% off. About how much will you pay for the jacket?

_____

Name _____ Date _____

Homework Practice

5NS1.2

Percent of a Number

Find the percent of each number.

1. 20% of 160 _____

2. 9% of 27 _____

3. 110% of 80 _____

4. 55% of 150 _____

Solve.

5. You are shopping and see a 70% off clearance sale. If the original price on the sweatshirt is $27.50, what is the sale price?

_____

6. If the sales tax for question 5 above is 6%, what is the amount of tax?

_____

Spiral Review

Estimate each percent. (Lesson 9–5)

7. 19% of 98 _____

8. 75% of 31 _____

9. 34% of $91 _____

10. 78% of 345 _____

11. Estimate the area of your yard if it is 31 feet by 19 feet.

_____

Name _____ Date _____

Problem-Solving Practice

5NS1.2

Percent of a Number

Solve.

1. Noah bought a shirt that was on sale for 80% of its regular price of $20.99. To the nearest cent, what was the sale price?

   _____

2. Roberto took a test that contained 25 questions. He received an 88% on the test. How many questions did he answer correctly?

   _____

3. Hillary uses propane as a fuel to heat her home. When the gas company comes to fill the 500-gallon tank, they add propane until the tank is 85% full. After a delivery, how many gallons of propane are in the tank?

   _____

4. Barbara's class was investigating methods used to heat homes in her town. She reported that 35% of the homes are heated by electricity. If there are 546 homes in her town, how many homes are heated by electricity? Round off your answer to the nearest whole number.

   _____

5. Shanta shopped for new clothes. She found the best deal at Gillian's Department store, where clothes were 90% of their original cost. A few days later these new prices were reduced by another 10%. How much did she pay for a jacket that originally cost $115.00? Write your answer to the nearest penny.

   _____

6. Chelsea plays on a softball team that has won 75% of its games. Her sister Catrina plays on a softball team that has won 80% of its games. If Chelsea's team has played 28 games, and Catrina's team has played 25 games, which team won more games? How many more games did they win?

   _____

Name _____ Date _____

Homework Practice

Problem-Solving Investigation

Choose the Best Strategy
Use any strategy shown below to solve.

• Look for a pattern.　　• Work backward.　　• Solve a simpler problem.

Use the following Venn diagram to answers questions 1–3.

Extracurricular Sports

Baseball　19　8　23　Soccer
12
9　11
18　Swimming
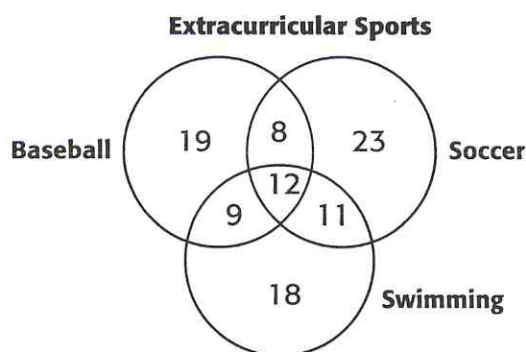
1. How many total people played soccer?

_____

2. How many people played only soccer and baseball?

_____

3. How many swam and played baseball only?

_____

4. How many played baseball, swam, and played soccer?

_____

5. How many people only swam and played soccer?

_____

Spiral Review

Find the percent of each number.　(Lesson 9–6)

6. 6% of 56

_____

7. 60% of 60

_____

Solve.

8. What is 20% of 465?

_____

9. 36% of 234 is what number?

_____

Name _____ Date _____

Homework Practice

Probability

The bag of cubes that is shown contains 4 stars, 2 fives, and 1 striped cube. You will pick only one cube. Find each probability. Write the answer as a fraction and a percent rounded to the nearest whole number.
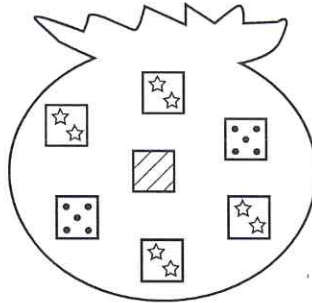
1. *P*(star)

_____

_____

2. *P*(stripe)

_____

_____

3. *P*(not a stripe)

_____

_____

4. *P*(star or stripe)

_____

_____

Spiral Review

Use any strategy shown below to solve. (Lesson 9–7)

• Look for a pattern.   • Work backward.   • Solve a simpler problem.

5. The softball team has won 4 times as many games as they lost. If they lost 6 games, how many games did they play?

_____

Name _____ Date _____

Problem-Solving Practice

Probability

Solve.

1. What is the probability that Lindy will roll a number divisible by 3 on a number cube?

   _____

2. How would you describe the probability that Adrian will roll the number 7 on a number cube?

   _____

3. Wayne went to a banquet. At the end of the meal, equal numbers of pieces of blueberry, apple, and cherry pie were passed out randomly to the dinner guests. What is the probability that Wayne will receive apple pie? What is the probability that he will receive either apple or cherry pie?

   _____

4. Lavonne's mother has brown eyes, and her father has blue eyes. Lavonne has brown eyes, and her husband has blue eyes. She knows that her children are equally likely to have brown or blue eyes. What is the probability that her first child will have blue eyes? If her first child has brown eyes, what is the probability that the second child will have blue eyes?

   _____

5. Sara has a spinner divided into 12 sections. Each section is numbered, starting with 1 and ending with 12. Sara spins the spinner. What is the probability that she will spin a prime number? What is the probability that she will spin an odd number? What is the probability that she will spin a number divisible by 5? What is the probability that she will spin a multiple of 3? What is the probability that she will spin a multiple of 4 or 5?

   _____

6. Eduardo cleaned out his school locker. At the bottom of the locker, he found 5 pencils with erasers, 1 pencil missing its eraser, 2 red pens, 3 black pens, and 4 blue pens. He placed all these items in a box and mixed them up. If he closes his eyes and picks one item out of the box, what is the probability that it is a pencil? What is the probability that it is a pen? What is the probability that it is a pencil with an eraser or a black pen?

   _____

Name _____ Date _____

Homework Practice

Sample Spaces

**Make an organized list or tree diagram to show the sample space.**

1. How many choices do you have for your lunch if you pick either ham or roast beef with cheese, tomatoes, or onions to go on your sandwich?

   _____

2. You go to a playground. You decide to climb across the monkey bars, go down the slide, and climb the rock wall. How many different ways can you complete your choices?

   _____

3. You are getting ready for school, and you only have a choice of white, black, or yellow shoes and either a pair of jeans or shorts. How many possible combinations can you have?

   _____

Spiral Review   (Lesson 9–8)

Use the spinner below to answer questions 4 and 5. Find each probability. Write the answer as a fraction and a percent rounded off to the nearest whole number.

4. $P(X)$

   _____

5. $P(Z)$

   _____

Name _____ Date _____
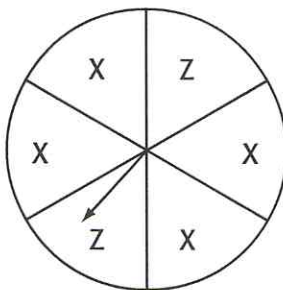
Problem-Solving Practice

Sample Spaces

Use the spinners below for Exercises 1–5. Draw a tree diagram for each exercise and tell the outcomes that are possible. Spin them only once.
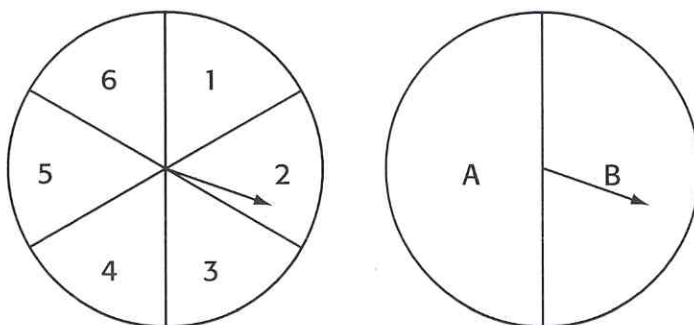
1. How many outcomes are possible for spinning both spinners?

_____

2. $P(1, A)$

_____

3. P(even number, consonant)

_____

4. P(not 3, vowel)

_____

5. $P(1$ or $6, A)$

_____

Name _____ Date _____

Homework Practice

Making Predictions

**For Exercises 1 and 2, use the following information.**

On a quiz show, a contestant correctly answered 9 of the last 12 questions.

1. Find the probability of the contestant correctly answering the next question.

   _____

2. 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?

   _____

Spiral Review (Lesson 9-9)

Use the spinners below to answer questions 3–6. Use a tree diagram to find each probability. Write the answer as a fraction and a percent rounded to the nearest whole number.

3. *P*(red, 2 or 3)

   _____

4. *P*(green, odd number)

   _____

5. *P*(blue, less than 5)

   _____
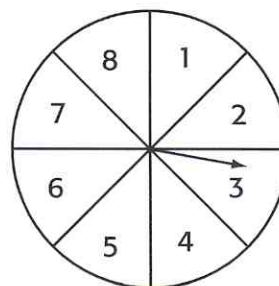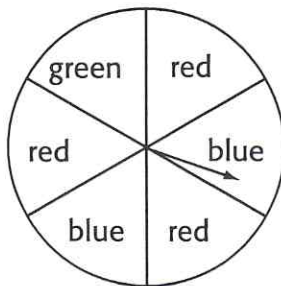
6. *P*(not green, greater than 4)

   _____

Name _____ Date _____

Problem-Solving Practice

Making Predictions

For Exercises 1–3, use the table of results of Jeremy's survey of favorite kinds of movies.

Favorite Movie Type	
Type	**People**
Drama	12
Foreign	3
Comedy	20
Action	15

1. How many people did Jeremy use for his sample?

   _____

2. If Jeremy were to ask any person to name his or her favorite type of movie, what is the probability that it would be comedy?

   _____

3. If Jeremy were to survey 250 people, how many would you predict would name comedy?

   _____

For Exercises 4–7, use the table of results of the Better Sleep Council's survey of Americans to find the most important factors for good sleep.

Most Important Factors for Good Sleep	
Good Mattress	32
Daily Exercise	20
Good Pillows	8
Healthy Diet	11
Other Factors	29

4. Predict how many people out of 400 would say that a good mattress is the most important factor.

   _____

5. What is the probability that any person chosen at random would not say that a healthy diet is the most important factor?

   _____

6. Suppose 250 people were chosen at random. Predict the number of people that would say good pillows are the most important factor.

   _____

7. What is the probability that any person chosen at random would say that daily exercise is the most important factor for good sleep?

   _____