My Notes

3. When finding percents, can the answer ever be greater than 100%? Give an example illustrating why or why not.

Check Your Understanding

4. 18 is what percent of 96?
5. Isaac wanted to earn $200 of the startup equipment cost for the deejay business. What percent of $2,500 is this?
6. The boys' aunt wanted to contribute $2,100 toward the cost. What percent of $2,500 is this?

LESSON 21-1 PRACTICE

7. $300 is what percent of $3,200?
8. **Construct arguments.** Suppose Nate and Isaac wanted to add another item to their list of startup equipment. Use an example to describe how you would find the percent this item's cost is of the total budget.
9. Nate and Isaac decided they also needed a work schedule to accommodate their deejay business. They planned to spend 12 out of 20 work hours per week performing as deejays. What percent is this?
10. Isaac predicted that advertising their business would add an additional $400 out of the $900 the brothers were adding to the equipment cost. What percent is $400 out of the additional amount they were adding?
11. Isaac's parents paid $3,200 per month to rent an office space for their own business. Of this amount, $352 was for utilities. What percent of their rental cost was for utilities?
12. Use a proportion to determine what percent $1,800 of the $2,500 startup cost is.
13. **Reason quantitatively.** Nate found sound amplifiers online for $150 off the price of $990, although he did not buy them. About what percent would he have saved on the speakers if he had bought them?

My Notes

Check Your Understanding

8. Find 45% of $649.

9. Isaac found a wireless microphone online at a sale price of 32% off.
- **a.** What is 32% of $250.00?
- **b.** What is the final price after the discount?
- **c.** Describe another way you could calculate the final price using a different percent.

10. Nate's mother wanted to buy some jewelry until she found out it was marked up 400%. If the original jewelry cost $100, what was the final price of the jewelry?

11. Explain why markup is necessary for retail sales.

LESSON 21-2 PRACTICE

12. What is 108% of 112?

13. Draw a group of 15 identical music CDs or other simple figures. Shade 60% of the figures. Explain how you know that you shaded 60%.

14. Isaac played a video game 20 times and won about 70% of the games. How many games did he win?

15. Nate tells his mom that he took a test with 60 questions and scored 85%. How many questions did he answer correctly? Show how you know.

16. **Reason abstractly.** In a survey of 398 students, 52% said they loved music. Use estimation to explain about how many students loved music.

17. **Make sense of problems.** Which costs less to buy, a $1,000 computer that is discounted 20% and then offered at an additional 10% off, or a $1,000 computer that is discounted 30%? Explain.

My Notes

LESSON 21-3 PRACTICE

5. An entertainment news reporter stated that "about $33\frac{1}{3}$% of Americans love listening to deejays, which is about 106,000,000 people." At the time the reporter made that statement, about how many people were in the United States?

6. 62% of Nate's class came to see one of his performances. If 186 students saw his performance, how many students are in Nate's class?

7. Isaac and Nate made enough money to pay off their startup loan and go shopping. Nate wants to buy a pair of basketball shoes that are on sale for 35% off. If Nate paid $70, what was the original cost of the shoes?

8. A compact MP3 player costs $52 after 4.5% sales tax. What was the original price?

9. Nate ordered a pizza to be delivered. The bill with 5% tax and 20% tip was $24.00. What was the original cost of the pizza?

10. Isaac's mother gave him a subscription to an entertainment magazine for his birthday. The magazine was offered at 56% off of the cover price. She paid $1.98 an issue. What was the cover price of the magazine?

11. Reason abstractly. Explain why the solutions to $\frac{12}{w} = \frac{25}{100}$ and $12 = 25\% \times w$ are the same.