Lesson 3-5: Solve Markup and Markdown Problems

1. Sample answer: The amount of markup or markdown represents a part of the original value, the whole. Use the percent equation to find the percent markup or markdown.

2. Sample answer: It represents the part and the original price represents the whole.

3. Sample answer: No, the percents of change are equal, but the amounts of change will not be equal since the value used for the “whole” will be different.

4. The tax rate is 8%.

5. a. $15; Sample answer: The original cost of the tickets was $52.50 · 2 = $105. Since Sheila paid $90 for the tickets, her friend gave her a discount of $105 - $90 = $15.

   b. 14%

6. a. $2,730

   b. $2,800

7. 20; 300
   60
   300; 60
   240

8. 650; 200; 450
   200; 0.444; 450
   44%

9. 13%

10. a. $35
    b. Sample answer: The clerk may have used the percent markup for the selling price.

11. Yes; The sales tax will be $46 · 0.06 = $2.76. The total cost will be $46 + $2.76 = $48.76. Nate will have enough to pay for everything.

12. The percent markup is about 67%.

13. a. The sale price is $543.20.
    b. The price for members is $488.88.

14. $520.63; Sample answer: $328 is 30% less than a previous sale price, or 70% of that price, so divide $328 by 0.7 to find the previous sale price ($468.57). Then that sale price is 10% less than the original selling price, or 90% of the original selling price. So the original selling price was $520.63.

15. Sample answer: She should buy the first bicycle. The first bicycle is less expensive, it costs $190. The second bicycle costs $212.80. Taking a 30% markdown, followed by an additional 20% off is equal to 44% savings, compared to 50% savings on the first bicycle.

16. $94.0