Unit Review   Key

1. In 1909, the average American consumed 18 pounds of butter. In 1999, the average American consumed about 27% of that amount. About how much butter did the average American consume in 1999? **4.86 lbs**	2. Pat makes 3% commission on his total weekly sales. If his weekly sales total $2,350, what is his amount of commission earned? **$70.50**	3. The population of California was 151.4 million people in 1980. By 1990, it was 190.8 million. Find the percent of change and round to the nearest tenth of a percent. **26%**	4. You estimated there were 89 jellybeans in a jar. There are actually 115 jellybeans in the jar. What is the percent error of your guess? **22.6%**	5. What is the sale price of a sweater if the regular price is $60 and it's on sale for 25% off? **$45**
6. Mark weighed 110 pounds last year. He weighs 119 pounds this year. What is the percent of change in his weight? Round to the nearest tenth of a percent if necessary. **8%**	7. What is the simple interest earned if $800 is deposited at an interest rate of 2% for 9 months? **$12**	8. Bryce predicted that 150 people would attend the concert. Because of rain, only 140 people actually showed up. What is the percent error of the concert attendance? **7%**	9. What is the total cost of an item that is marked $20.00 if the sales tax is 8%? **$21.60**	10. Athletic shoes that regularly sell for $85.99 are on sale for 20% off. How much is saved on the shoes? **$17.20**
11. Water freezes at 32°F, but in Ron's experiment, the water froze at 33°F. What is the percent error in Ron's experiment? **3%**	12. Shoes cost a store $56.40. The mark up is 17%. Find the amount increase and the selling price of the shoes. **$65.99**	13. What is the sale price of a new computer that costs $450.00 if the amount of discount is 25% off? **$337.50**	14. Does taking a 7% discount on an item and then paying 7% tax result in the original price of the item? Justify your answer. **NO**	15. What is the total amount of interest paid on a $150 loan with an 8% interest rate and a time of 2 years? **$24**
16. A salesperson made $128 commission selling merchandise. His commission rate was 5%. Find the dollar amount of his sales. **$2560**	17. The price of a gallon of gasoline increased from $2.50 a gallon to $2.75 a gallon. What was the percent of increase? **10%**	18. What is the selling price of a $60 video game with a 28% mark up and 6% tax? **$81.41**	19. If a 15% tip was left for a server, what was the amount of the tip in dollars if the total cost of the meal was $24? **$3.60**	20. Wesley expected to run 2 miles in 14 minutes. He actually ran the 2 miles in 16 minutes. What was the percent error? **12.5%**
21. Henry earns $50 interest on money he invested at a 5% interest rate for 6 months. How much money did he invest? **$2000**	22. If an item is discounted 30% and then an additional 20% at the register, does that equal to 50% off the original price? Explain with examples. **NO**	23. What is the ending balance if $900 is deposited at a simple-interest rate of 8% for 3 years? **$1116**	24. John's electric bill went from $68 last month to $54.40 this month. What was the percent of decrease in his bill? **20%**	25. A $59.50 coat is on sale for $36.50. About how much is the percent of discount? **38.7%**

1. $27\% \times 18 = \boxed{4.86 \text{ lbs}}$

2. $3\% \times 2,350 = \boxed{\$70.50}$

3. $\begin{array}{r} 190.8 \\ -151.4 \\ \hline 39.4 \end{array}$ $\dfrac{39.4}{151.4} = \dfrac{x}{100}$ $\begin{array}{l} 3940 = 151.4x \\ x = \boxed{26\%} \end{array}$

4. $115 - 89 = 26$ $\dfrac{26}{115} = .2260 = \boxed{22.6\%}$

5. $60 \times 25\% = 15$ $60 - 15 = \boxed{\$45}$

6. $119 - 110 = 9$ $\dfrac{9}{110} = .0818 = \boxed{8\%}$

7. $I = PRT$
$I = 800 \cdot .02 \cdot .75$
$I = \boxed{\$12}$

8. $150 - 140 = 10$ $\dfrac{10}{140} = .0714 = \boxed{7\%}$

9. $20 \times 8\% = 1.60$ $20 + 1.60 = \boxed{\$21.60}$

10. $85.99 \times 20\% = \boxed{\$17.20}$

11. $33 - 32 = 1$ $\frac{1}{32} = .03125 = \boxed{3\%}$

12. $56.40 \times 17\% = 9.588$ $\begin{array}{r} 9.588 \\ +56.400 \\ \hline 65.988 \end{array}$ $\boxed{\$65.99}$

13. $450 \times 25\% = 112.5$ $450 - 112.5 = \boxed{\$337.5}$

14. $\boxed{No}$ $100 \times 7\% = 7$ $100 - 7 = \$93$
    $93 \times 7\% = 6.51$ $93 + 6.51 = \$99.51$
    $93 < 99.51$

15. $I = PRT$
    $I = 150 \cdot .08 \cdot 2$
    $I = \boxed{\$24}$

16. $.05x = 128$
    $x = \boxed{\$2560}$

17. $2.75 - 2.50 = .25$ $\frac{.25}{2.50} = .1 = \boxed{10\%}$

18. $60 \times 28\% = 16.8$ $16.8 + 60 = 76.80$ $76.80 \cdot 6\% = 4.608$
    $76.80 + 4.608 = \boxed{\$81.41}$

19. $24 \times .15 = \boxed{\$3.60}$

20. $16 - 14 = 2$ $\quad \frac{2}{16} = .125 = \boxed{12.5\%}$

21. $I = PRT$
$50 = P \cdot .05 \cdot .5$
$50 = .025P$
$\boxed{P = \$2000}$

22. $\boxed{NO}$ $\qquad 100 \times 30\% = 30 \qquad 100 - 30 = 70$
$\qquad\qquad\qquad 70 \times 20\% = 14 \qquad 70 - 14 = \underline{\$56}$

$\qquad\qquad\qquad 100 - 50\% = 50 \qquad 100 - 50 = \underline{\$50}$

$$\underline{\underline{56 > 50}}$$

23. $I = PRT \qquad\qquad\qquad 900 + 216 = \boxed{\$1116}$
$\quad I = 900 \cdot .08 \cdot 3$
$\quad I = 216$

24. $68 - 54.40 = 13.5 \qquad \frac{13.5}{68} = .19852 = 19.9\%$
$\qquad\qquad\qquad\qquad\qquad \boxed{20\%}$

25. $59.50 - 36.50 = 23 \qquad 59.50x = 23$
$\qquad\qquad\qquad\qquad\qquad x = .3865 = \boxed{38.7\%}$