

Name: _____ *Key* _____ Period _____

$248 \cdot (.8) = \$198.40$

Percent Increase and Decrease Word Problems

1. A sports store near Big Bear Lake is having a 20% off sale on all water skis. What will the sale price be for water skis which regularly sell for \$248?

2. Skis at a sports store near Snow Summit are on sale for \$476. If the original price was \$560, what discount rate does this represent?

$\frac{84}{560} = 15\% \downarrow$ $\frac{560}{84} = 6.67$

3. The average fine for entering a National Forest Wilderness without a permit increased from \$65 to \$78. What rate of increase is this?

$78 - 65 = 13$ $\frac{13}{65} = 20\% \uparrow$

4. A stereo is marked down \$75. If this is a 15% decrease, find the sale price?

$\frac{75}{x} = \frac{15}{100}$ $\frac{560}{75} = 7.47$

ORIGINAL = \$500 $\$425$

5. A pair of snow boots at an equipment store in Big Bear that originally cost \$60 is on sale for \$36. What is the rate of discount?

$60 - 36 = 24$ $\frac{24}{60} = 40\% \text{ off}$

6. An employee's hourly raise went up from \$10 per hour to \$12 per hour. What is the rate of increase?

$\frac{2}{10} = 20\% \uparrow$

7. A math book at the Victor Valley College bookstore originally cost \$84 to purchase. If they sell it for \$126, what is the markup rate?

$126 - 84 = 42$ $\frac{42}{84} = 50\% \uparrow$

8. Bruce's hourly wage increased from \$15.50 to \$18.60. What rate of increase does this represent?

$\frac{3.10}{15.50} = 20\% \uparrow$

9. A stereo system is marked down from \$450 to \$382.50. What is the discount rate?

$450 - 382.5 = 67.50$ $\frac{67.50}{450} = 15\% \downarrow$

10. Rosa received a monthly raise of \$162.50. If this represented a 6.5% increase, what is her monthly salary after the raise?

$\frac{162.50}{x} = \frac{6.5}{100}$ $6.5x = 16250$ $x = 2500$

$\frac{162.50}{2500} = 6.5\%$ $\$2500$ $\$2662.50$

11. A store marks up merchandise 40% for profit. If an item costs the store \$12, what is the selling price?

$12(0.4) = 4.80 + 12 = \$16.80$
 $12 \cdot (1.4) = \$16.80$

12. Jasmine bought computer which was discounted from \$350 to \$273. What is the discount rate?

$\frac{77}{350} = 22\%$

13. The purchase price of an iPad is \$650. What is the total price if the sales tax rate is 8%?

$650(0.08) = 52$ $650 + 52 = \$702$ $650(1.08) = \$702$

14. A managers' salary at Green Dot increased from \$48,000 to \$51,360. What is the rate of increase?

$\frac{3360}{48000} = 7\% (0.07)$

15. An employee's salary increased by \$4,500 which represents a 15% raise. What is the employee's new salary?

$\frac{4500}{x} = \frac{15}{100}$ $\frac{450,000}{15} = \frac{15x}{15}$ $30,000 = x$

new salary $30,000 + 4,500 = \$34,500$

16. Yahoo in Sunnyville currently has a staff of 6200 employees. Next month, Yahoo will decrease its staff by 8%. How many people will be employed by Yahoo next month?

$6200 \cdot (0.08) = 496 \downarrow$

$\begin{array}{r} 6200 \\ - 496 \\ \hline 5704 \end{array}$

$$14 - 12 = 2 \quad \frac{2}{12} = \frac{1}{6} = 17\% \uparrow$$

Percent Increase and Decrease Word Problems

17. Darren makes \$12 per hour. Next semester, he will be making \$14 per hour. What rate of increase does this represent? Round the answer to the nearest tenth of a percent. $17\% \uparrow$

18. Lowes in Rancho Cucamonga is having a one-day 20% off sale. What will the sale price be for an exterior door which regularly sells for \$360? $360 \times 0.2 = 72$ $360 - 72 = \$288$
 $360 \times .8 = \$288$

19. An LCD TV is on sale for 24% off. If the original price was \$800, find the sale price.

$$800 \cdot 0.76 = \$608 \quad 800 \cdot 0.24 = 192 \quad 800 - 192 = \$608$$

20. An employee's salary for Alar Services is \$37,500. Next year, she will get an 8% increase in salary. How much is her new salary? $37,500 \cdot (0.08) = 3000$ $37,500 + 3000 =$

$$\$40,500$$

21. A bank tellers' hourly wage will increase from \$24 to \$27.60. What percent increase does this represent?

$$27.60 - 24 = 3.60 \quad \frac{3.6}{24} = 0.15 = 15\% \uparrow$$

22. Gas prices decreased this week from \$4 per gallon to \$3.80 per gallon. What rate of decrease does this represent? (Rate is another word for percent.)

$$4 - 3.80 = .20 \quad \frac{.20}{4} = 0.05 \quad 5\% \downarrow$$