

Chapter 5

Review

1. Write 91% as a decimal. D2P

$$0.91$$

2. Write the decimal 0.33 as a percent.

$$33\%$$

3. Write $\frac{11}{20}$ as a percent. $11 \div 20 =$

$$0.55 \quad (55\%)$$

4. What percent of 75 is 9? $\frac{\text{is}}{\text{of}} = \frac{\%}{100}$

$$\frac{9}{75} = \frac{x}{100} \quad (x = 12\%)$$

5. What number is 28% of 25?

$$\frac{x}{25} = \frac{28}{100} \quad (x = 7)$$

6. 35% of what number is 35?

$$\frac{35}{x} = \frac{35}{100} \quad (x = 100)$$

7. 102.5 is what percent of 125?

$$\frac{102.5}{125} = \frac{x}{100} \quad (x = 82\%)$$

8. 48 is 32% of what number?

$$\frac{48}{x} = \frac{32}{100} \quad (x = 150)$$

Find the percent of decrease or increase. Round to the nearest tenth of a percent.

9. percent of increase from 43 to 78

$$\frac{78 - 43}{43} = \frac{35}{43} = 0.8139 \quad (81.4\%)$$

10. percent of decrease from 30 to 22

$$\frac{30 - 22}{30} = \frac{8}{30} = 0.26 \quad (26.7\%)$$

11. You estimate that there are 40 marbles in a jar. The actual amount is 48 marbles. Find the percent error. Round to the nearest tenth of a percent.

$$\frac{48 - 40}{48} = 0.16 \quad (16.6\%)$$

12. Find the sale price of a \$70 item after a 20% discount.

$$70 \cdot 0.2 = 14 \quad 70 - 14 = 56$$

13. Find the original price of a salt lamp that is \$92 after a 20% discount.

$$100 - 20 = 80\% \quad \frac{92}{x} = \frac{80}{100} \quad (x = 115)$$

Chapter 5

(continued)

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14. Find the selling price of a \$30 item after a 40% markup.

$30 \cdot 0.4 = 12$ $30 + 12 = \$42$

15. You deposit \$900 in a savings account. The account earns 4% simple interest per year.

$I = Prt$

- a. What is the interest earned after 8 years?

$I = 900 \cdot 0.04 \cdot 8 = 288$

- b. What is the balance after 8 years?

add! $900 + 288 = \$1188$

16. You deposit \$200 in an account. The account earns \$15 simple interest in 3 years. What is the annual interest rate?

$I = Prt$
 $15 = 200 \cdot r \cdot 3$

$15 = 600r$
 $\div 600 \quad \div 600$
 $0.025 = r$ 2.5%

17. How long does it take an account with a principal of \$600 to earn \$90 in interest at a simple annual interest rate of 5%?

$I = Prt$
 $90 = 600 \cdot 0.05 \cdot t$
 $90 = 30t$
 $\div 30 \quad \div 30$ $t = 3 \text{ years}$

18. 80% of a number is x . What is 100% of the number? Assume $x > 0$.

19. Account A has a simple annual interest rate of 3% and account B has a simple annual interest rate of 3.5%. How much more interest do you earn per year when you deposit x dollars in account B instead of account A?

20. Order the numbers 71.2% , $\frac{3}{4}$, and 0.742 from least to greatest.

0.712 0.75 0.742 $71.2\%, 0.742, \frac{3}{4}$

21. Identify the percent of change from $\frac{2}{5}$ to $\frac{5}{15}$ as an increase or a decrease. Then find the percent of change. Round to the nearest tenth of a percent.

decrease $\frac{2}{5} - \frac{5}{15} = \frac{1}{15} \div \frac{2}{5} = \frac{1}{6} = 0.1\bar{6}$

22. Shelter A has a capacity of 300 beds and is 70% occupied. Shelter B is 35% occupied. The ratio of the occupancy of Shelter A to Shelter B is 2 : 5. How many beds are in Shelter B?

$300 \cdot 0.7 = 210$ $2 : 5 = 2.5$
 $210 \cdot 2.5 = 525$
occupied 1500 beds

525 is 35% of what

$\frac{525}{x} = \frac{35}{100}$ $x = 1500 \text{ beds}$