

Chapter 8

Ratio, Proportion, and Percent

8.7 Finding a Percent of a Number

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NOTES (8.7) Finding a Percent of a Number

Remember: "of" means multiply!!

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Do # 8-18 even like this

$$7) 45\% \text{ of } 20 = \textcircled{9}$$

$$\frac{45}{\cancel{100}} \times \frac{20}{1} = \frac{45}{5} = 9$$

$$9) 85\% \text{ of } 12 = \textcircled{10.2}$$

$$\frac{85}{\cancel{100}} \times \frac{12}{1} = \frac{85 \times 3}{25} = \frac{255}{25}$$

$$17) 33 \frac{1}{3}\% \text{ of } 63 = \textcircled{21}$$

$$33 \frac{1}{3}\% = \frac{1}{3}$$

$$\frac{1}{\cancel{3}} \times \frac{63}{1} = \frac{21}{1} = 21$$

$$\begin{array}{r} 10.2 \\ 25 \overline{) 255} \\ \underline{25} \\ 05 \\ \underline{0} \\ 50 \end{array}$$

Do # 20-26 even like this

21) 10 % discount; pay $\$36$

10 % of 40

$$\frac{10}{100} \times \frac{40}{1} = \frac{10 \cdot 2}{5} = \frac{20}{5}$$

$$\begin{array}{r} \$4 \text{ discount} \quad 40 \\ - 4 \\ \hline \$36 \end{array}$$

25) 30% discount; pay $\$28$

30% of 40

$$\frac{30}{100} \times \frac{40}{1} = \frac{60}{5} = \$12 \text{ discount} \quad 40$$
$$\begin{array}{r} - 12 \\ \hline \$28 \end{array}$$

Do # 32-28 even (estimation) like this
(use compatible #'s)

33) 75% of 804 = 600

$$\frac{3}{4} \times \frac{800}{1} = 3 \times 200$$

35) 15% of 8.50 = 1.5

$$\frac{15}{100} \times \frac{10}{1} = \frac{15}{10} = 1\frac{5}{10}$$

NOTES *8.7) part II Interest, Tax, and Tip

Interest is the amount paid for the use of money.

When we save money, we earn interest.

When we borrow money we pay interest.

Principal is the amount we save or borrow.

Simple interest is interest paid on only the principal.

Annual interest rate is the % of principal paid per year.

* Memorize this formula*

$$I = Prt$$

interest = principal x rate x time

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Do # 28 & 30 like this

31) $I = Prt$

$$I = 112 \times 2.5\% \times 2$$

$$I = 112 \times 0.025 \times 2$$

$$I = 112 \times 0.05$$

$$I = \$5.60$$

$$\frac{2.5}{100} = 0.025$$

$$\begin{array}{r} 112 \\ 0.05 \\ \hline 5.60 \end{array}$$

29) $I = Prt$

$$I = 320 \times 3\% \times 4$$

$$I = 320 \times 0.03 \times 4$$

$$I = 320 \times 0.12$$

$$I = \$38.40$$

$$\begin{array}{r} 320 \\ 0.12 \\ \hline 3200 \\ \hline 38.40 \\ \hline \end{array}$$

#48 = 4pts

#50 = 1 pt

#52 = 4 pts

#56 = 3 pts

54) 20% of \$43.72

20% of \$45.00

10% of \$45 = 4.50

$$\frac{\overset{x\ 2}{\$9.00}}{\text{---}} = 20\%$$

58) a) after barrier 1

100 - 0.1 (100)

$$100 - 10 = 90$$

after purple star

$$90 + 0.05 (90)$$

$$90 + 4.5 = 94.5$$

after 2nd barrier

$$94.5 - 0.1 (94.5)$$

$$94.5 - 9.45 = 85.05$$

$$\begin{array}{r} 90 \\ 0.05 \\ \hline 4.50 \end{array}$$

$$\begin{array}{r} 94.50 \\ 9.45 \\ \hline 85.05 \end{array}$$

power at bridge = 85.05