

## HW 8.1B Percentage PRACTICE problems

- \$ 3082.50 1) Eduardo deposits \$3000 into a savings account that earns 2.75% annual interest rate. How much money does he have at the end of one year?

$$3000(1 + .0275) =$$

$$3000(1.0275) = 3082.50$$

- \$ 3162 2) Brittany deposited a birthday check into a CD that earned 2.0% annual interest rate. After 1 year she had earned \$62 in interest. Assuming she made no additional deposits or withdrawals during the year, how much did she have altogether in her account after 1 year?

$$62 = .02B$$

$$3100 = B$$

$$\begin{array}{r} 3100 \\ + 62 \\ \hline 3162 \end{array}$$

- \$ 1078.43 3) Morgan deposits a birthday check into a savings account. A year later she has a total of \$1100. If the interest rate was 2.0%, how much did she deposit?

$$X \frac{(1 + .02)}{1.02} = \frac{1100}{1.02}$$

$$X = 1078.43$$

- \$ 1274.65 4) Rafael's monthly take home pay (net income) is \$905. If he pays 29% in taxes, then what is his gross (pre-tax) income?

$$X \frac{(1 - .29)}{.71} = \frac{905}{.71}$$

$$X = 1274.65$$

- 33% 5) Jake's monthly take home pay (net income) is \$1105. If his gross pay (pre-tax) is \$1645, then what is his tax rate?

$$\frac{1645}{1645} (1 - P) = \frac{1105}{1645}$$

$$1 - P = .67$$

$$P = .33 \Rightarrow 33\%$$

- \$ 73.10 6) Serena's receipt shows that she paid \$79.61 for a new pair of jeans including sales tax. The sales tax rate is 8.9%. How much did the jeans cost before taxes?

$$X \frac{(1 + .089)}{1.089} = \frac{79.61}{1.089}$$

$$X = 73.10$$

- \$ 6.51 7) Refer to #6. How much did Serena pay in taxes?

$$79.61 - 73.10 = 6.51$$

\$ 134.85 8) Jackson went shopping for back to school clothes. His receipt at the Gap shows that he paid \$146.72. The retail tax rate in Gilbert is 8.8%. How much was his subtotal (pre-tax amount)?

$$X \frac{(1 + .088)}{1.088} = \frac{146.72}{1.088} \quad X = 134.85$$

No, \$ 38.03 9) At the same Gap that Jackson is shopping, Denise is waiting in line to buy a shirt with a labeled price of \$34.95. She has \$37 and some change in her wallet. Does she have enough money? (What is her total?)

$$34.95(1 + .088) = \$38.03$$

\$ 51.43 10) Taylor, Laron and Jesus all go to Rock Taco for lunch. Jesus feels blessed to have good friends like Taylor and Laron, so he treats them to lunch. He also thinks service was great, so he tipped 20%. He paid \$61.71. How much was lunch before the tip?

$$X \frac{(1 + .20)}{1.2} = \frac{61.71}{1.2}$$

$$X = 51.43$$

\$ 902 11) Stefanie is saving for a new car. She has started a small savings account that earns 2.5% annual interest. She only made the one initial deposit and earned \$22 in interest. What is the balance of her account at the end of one year?

$$A = PB$$

$$\frac{22}{.025} = \frac{.025}{.025} B$$

$$880 = B(\text{Initial Deposit})$$

$$\begin{array}{r} 880 \\ + 22 \\ \hline 902 \end{array}$$