

**Practice 6.3 – Applications of Percent**

Name \_\_\_\_\_

1. Round each dollar amount to the nearest cent.

a. \$168.257

\_\_\_\_\_

b. \$57.234

\_\_\_\_\_

c. \$3.396

\_\_\_\_\_

2. Find the sales tax on a purchase of \$33.60 if the sales tax rate is 8%.

3. Find the total cost of a \$86.56 purchase if the sales tax rate is 4.3%.

4. If a shirt costs \$25 and the sales tax is \$1.60, what is the sales tax rate?

5. If a house is worth \$250,000 and the property tax is \$3,750, what is the property tax rate?

6. A jewelry salesman earns a 12% commission. Find the commission on a \$500 necklace.

7. If you earn an \$77 commission on a \$440 sale, what is your commission rate?

8. The tuition at a community college increased from \$2500 to \$2650 per semester.

a. What is the increase in tuition?

b. What is the percent of increase in tuition?

9. A company decreased their workforce from 1000 to 950 employees.

a. What is the decrease in the workforce?

b. What is the percent of decrease in the workforce?

10. Use the information on the paycheck stub to find the tax rate for the federal withholding, worker's compensation, Medicare, and Social Security taxes that were deducted from the gross pay.

Check Date: January 12, 2012	Employee # 460927
Gross Pay	\$ 520.00
Taxes	
Federal Tax	\$ 46.80
Worker's Compensation	\$ 16.90
Medicare	\$ 7.80
Social Security	\$ 38.48
Net Pay	\$ 410.02

Practice 6.3 – Applications of Percent

Name Key

1. Round each dollar amount to the nearest cent.

a. \$168.257

$$\underline{\$168.26}$$

b. \$57.234

$$\underline{\$57.23}$$

c. \$3.396

$$\underline{\$3.40}$$

2. Find the sales tax on a purchase of ~~whole~~ \$33.60 if the sales tax rate is ~~8%~~ 9%.

$$\frac{\text{part}}{\text{whole}} = \frac{\%}{100}$$

$$\frac{\cancel{X}}{\cancel{33.60}} = \frac{\cancel{8}}{100}$$

$$\frac{100X}{100} = \frac{268.80}{100}$$

$$X = 2.688$$

$$\approx \$2.69$$

The sales tax is \$2.69.

3. Find the total cost of a \$86.56 purchase if the sales tax rate is 4.3%.

Find the amount of tax

$$\frac{X}{86.56} = \frac{4.3}{100}$$

$$\frac{100X}{100} = \frac{372.208}{100}$$

$$X = 3.72208$$

$$\approx \$3.72 + 86.56 = \$90.28$$

The total cost is \$90.28

4. If a shirt costs \$25 and the sales tax is \$1.60, what is the sales tax rate?

$$\frac{\text{part}}{\text{whole}} = \frac{\%}{100}$$

$$\frac{\cancel{1.60}}{\cancel{25}} = \frac{\cancel{X}}{100}$$

$$\frac{25X}{25} = \frac{160}{25}$$

$$X = 6.4\%$$

The sales tax rate is 6.4%

5. If a house is worth ~~whole~~ \$250,000 and the property tax is ~~part~~ \$3,750, what is the property tax rate?

$$\frac{3750}{250,000} = \frac{X}{100}$$

$$\frac{250,000X}{250,000} = \frac{375000}{250,000}$$

$$X = 1.5\%$$

6. A jewelry salesman earns a 12% commission. Find the commission on a \$500 necklace.

$$\frac{X}{500} = \frac{12}{100}$$

$$\frac{100X}{100} = \frac{6000}{100}$$

$$X = 60$$

The commission is \$60.

7. If you earn an \$77 commission on a \$440 sale, what is your commission rate?

$$\frac{77}{440} = \frac{X}{100}$$

$$\frac{440X}{440} = \frac{7700}{440}$$

$$X = 17.5\%$$

The commission rate is 17.5%

8. The tuition at a community college increased from \$2500 to \$2650 per semester.

a. What is the increase in tuition?

$$2650 - 2500 = 150$$

b. What is the percent of increase in tuition?

$$\frac{\text{part}}{\text{whole}} = \frac{150}{2500} = \frac{9\%}{100}$$

use the original amount

$$\frac{2500x}{2500} = \frac{15000}{2500}$$

$$x = 6\%$$

The percent increase is 6%.

9. A company decreased their workforce from 1000 to 950 employees.

a. What is the decrease in the workforce?

$$1000 - 950 = 50$$

b. What is the percent of decrease in the workforce?

$$\frac{50}{1000} = \frac{x}{100}$$

$$\frac{1000x}{1000} = \frac{5000}{1000}$$

$$x = 5$$

There was a 5% decrease in the workforce.

10. Use the information on the paycheck stub to find the tax rate for the federal withholding, worker's compensation, Medicare, and Social Security taxes that were deducted from the gross pay.

Check Date: January 12, 2012	Employee # 460927
Gross Pay	\$ 520.00
Taxes	
Federal Tax	9% \$ 46.80
Worker's Compensation	3.25% \$ 16.90
Medicare	1.5% \$ 7.80
Social Security	7.4% \$ 38.48
Net Pay	\$ 410.02

$$\frac{46.80}{520} = \frac{x}{100}$$

$$\frac{520x}{520} = \frac{4680}{520}$$

$$x = 9\%$$

$$\frac{16.90}{520} = \frac{x}{100}$$

$$\frac{520x}{520} = \frac{1690}{520}$$

$$x = 3.25\%$$

$$\frac{7.80}{520} = \frac{x}{100}$$

$$\frac{520x}{520} = \frac{780}{520}$$

$$x = 1.5\%$$

$$\frac{38.48}{520} = \frac{x}{100}$$

$$\frac{520x}{520} = \frac{3848}{520}$$

$$x = 7.4\%$$