

LESSONS 1-6, 1-7

Commission and Graduated Commission

A commission is an amount of money that you are paid for selling a product or service. Your commission rate may be a specified amount of money for each sale or it may be a percent of the total value of your sales. A graduated commission offers a different rate of commission for each of several levels of sales.

$$\text{COMMISSION} = \text{COMMISSION RATE} \times \text{TOTAL SALES}$$

$$\text{TOTAL GRADUATED COMMISSION} = \text{SUM OF COMMISSIONS FOR ALL LEVELS OF SALES}$$

1. Ken Oberlin sells cleaning supplies for Soapcraft. He receives a straight commission of 12% of the selling price of each item sold. What commission will he receive for selling \$2591.67 worth of cleaning supplies? _____
2. Marion Robarge sells cosmetics. Her commission is 30% of the selling price of every item she sells. What is her commission when she sells cosmetics totaling \$717.53? _____
3. You are selling storm windows and doors. You receive a straight commission of 15% of the selling price of each storm window and 20% of the selling price of each door. What commission will you receive for selling storm windows worth \$1535 and doors worth \$790? _____
4. Audrey Sanders sells sports equipment. She is paid a commission of 514% of her first \$1500 in sales during the week and 10% on all sales over \$1500. What is her commission in a week in which she sells \$2510 worth of sports equipment? _____
5. Jasper Carrott sells farm chemicals. He is paid a commission of 9% of his first \$6000 in sales during the month and 14% on all sales over \$6000. What is his commission in a month in which he has sales worth \$16,120? _____
6. Dan Valdez sells appliances for McKenny Appliance Store. He is paid an 8% commission on the first \$1000 of sales, 10% on the next \$1500, and 15% on all sales over \$2500. What is his commission on \$4910 in sales? _____
7. Elanor Fray demonstrates microwave ovens at the National Home Show. She is paid \$7 each for the first 7 demonstrations and \$11 for each demonstration over 7. What is Maria's commission for a day in which she makes 12 demonstrations? _____
8. You are paid a commission plus \$3.40 per hour with time-and-a-half overtime for all hours over 8 per day. Your commission consists of 4% of the first \$3000 in sales and 5% on all sales over \$3000. Find your gross pay for a week in which you worked 9 hours on Monday, 8 hours on Tuesday, 11 hours on Wednesday, 9 hours on Thursday, 10 hours on Friday, and 8 hours on Saturday. Your total sales for the week were \$4115. _____
9. You are the sales manager for the Shockey Solar Panel Company. You receive a commission based on the total sales of all the salespeople you manage. Your commission is 2% of the first \$80,000 of sales, 4% of the next \$80,000, and 5% of all sales over \$160,000. What is your commission for a month in which your salespeople sold \$242,100 in solar panels? _____

REVIEW OF FUNDAMENTALS

WORKSHOP 9: Finding a Percentage

In mathematics, of means "times" and is means "equals."

35% of 80 is what number?

$$35\% \times 80 = n \quad \leftarrow \text{Let "n" stand for the unknown number.}$$

$$0.35 \times 80 = n \quad \leftarrow \text{Change the percent to a decimal.}$$

$$28 = n \quad \text{Multiply.}$$

$$35\% \text{ of } 80 = 28 \quad \leftarrow \text{Write the answer.}$$

Find the percentages.

1. 20% of 60 _____ 2. 60% of 50 _____ 3. 35% of 86 _____

4. 9.5% of 44 _____ 5. 18.2% of 260 _____ 6. 17.3% of 85 _____

7. 6% of 856 _____ 8. 0.6% of 15.6 _____ 9. 125% of 60 _____

10. 18% of \$70 _____ 11. $8\frac{1}{2}\%$ of \$400 _____ 12. 5.5% of \$268 _____

13. 65% of the 880 students at Morton High School take mathematics.
How many students take mathematics? _____

14. Sales tax: 6.5% of your \$8.98 purchase. What is the sales tax? _____

WORKSHOP 10: Average (Mean)

The average, or mean, of two or more numbers is the sum of the numbers divided by the number of items added.

To find the mean of \$42.90, \$64.20, \$37.52, and \$81.86:

$$\frac{\$42.90 + \$64.20 + \$37.52 + \$81.86}{4} = \frac{\$226.48}{4} = \$56.62$$

Find the mean for each group.

1. 10, 12, 15, 11 _____ 2. 420, 460, 410, 470 _____

3. 0.5, 0.29, 0.42, 0.36 _____ 4. \$42.50, \$42.80, \$37.60, \$40.20 _____

Use the rates of taxation chart on page 7 for problems 5–7.

5. What is the average general school tax rate for the five school districts? _____

6. What is the average construction school tax rate for the five districts? _____

7. What is the average total school tax for the five school districts? _____