

# Lesson 9 Percent

You come in contact with percents every day. Sales tax, inflation rates, and discounts are a few examples. Percents can be written as a fraction. They are always over 100 because percent means "out of a hundred" parts. Knowing how to use percents can be helpful in solving many types of problems both in everyday life and on the TABE.

**Example** Phil put \$200 in the bank where it will pay 5% interest per year. How much money will he have at the bank after one year?

**Step 1.** Change the percent to a decimal. First drop the "%" sign. There's no decimal point, so put one at the right of the number 5. Then move the decimal point two places to the left

$$5\% \rightarrow 5. \rightarrow .05$$

**Step 3.** Count the places to the right of the decimal point in each number.

$$\begin{array}{r} 200. \rightarrow 0 \text{ decimal places} \\ 0.05 \rightarrow + 2 \text{ decimal places} \\ \hline 2 \text{ decimal places} \end{array}$$

**Step 5.** Add this amount to the original number:  $\$200 + \$10 = \$210$ .

$$\begin{array}{r} \$200.00 \\ + \$10.00 \\ \hline \$210.00 \end{array}$$

Phil will have \$210 at the end of the year.

**Step 2.** Multiply the numbers as if they were both whole numbers.

$$\begin{array}{r} 200 \\ \times 5 \\ \hline 1000 \end{array}$$

**Step 4.** Add the number of decimal places to find the total number of decimal places. Starting at the right of the answer, count to the left the total number of decimal places. Then place the decimal point.

$$\begin{array}{r} 1000 \rightarrow 10.00 \\ \$10.00 \\ 2 \text{ decimal places} \end{array}$$

The amount of interest paid is \$10.00.

### Hint

Sometimes you'll need to fill places with zeros when placing the decimal in a multiplication problem.

**Step 6.** You may also write 5% as a fraction and set up a proportion. Then add that number to the original number.

$$5\% = \frac{5}{100} = \frac{\$}{200} \rightarrow \frac{5}{100} \times \frac{2}{2} = \frac{10}{200}$$

## Test Example

Read the question. Circle the answer.

1 Full-grown Indian elephants can be 10 feet tall. African elephants are about 30% taller. About how tall is an African elephant?

- A 16 feet
- B 11 feet
- C 15 feet
- D 13 feet



- 1 D Change 30% to 0.30 and multiply this by the size of the Indian elephant:  $10 \text{ feet} \times 0.30 = 3 \text{ feet}$ . To find the size of the African elephant, add  $10 \text{ feet} + 3 \text{ feet} = 13 \text{ feet}$ .

## Practice

Read the question. Circle the answer.

- 1 A CD player sells for \$95.99. The sales tax is 7%. What is the total cost for 2 CD players?
- A \$205.42  
B \$204.36  
C \$215.63  
D \$102.71
- 2 Emanuel pays 5% of his monthly salary of \$2495.55 to his health-care plan. To compute this payment, he must multiply \$2495.55 by
- F 0.005  
G 0.5  
H 0.05  
J 0.0005
- 3 A snow-removal service offered a one-time special of 20% off their regular fee of \$30 per hour. What was the snow removal fee for 103 hours of work?
- A \$2090.00  
B \$2472.00  
C \$2137.00  
D \$2060.00

Study this advertisement for a sale. Then do numbers 4 and 5.

**Clothes Clearout!**  
All Women's Blouses  
\$50.00

**Installation Plan**  
Put 20% down, then pay the balance in 2 equal installments!

- 4 There is a 6% sales tax. If you pay cash, what is the total cost of the blouse with tax?
- F \$53.00                      H \$54.00  
G \$52.00                      J \$56.00
- 5 If you buy the blouse through the installment plan, what is the amount of the down payment?
- A \$8.00                      C \$6.00  
B \$12.00                     D \$10.00

Check your answers on page 117.