

2.6 Using Percents

Name: \_\_\_\_\_ Date: 9/29

Goal: I can write a percent as a fraction and a decimal  
I can write a fraction as a percent.  
I can calculate tips of bills.

Vocabulary:

Percent: *out of 100*  
\* *Make your fraction have a denominator of 100*  
\* *Move your decimal 2 places to the right to turn it into a percent.*

Write each percent as a fraction and as a decimal. Simplify if possible.

1. 11%  $\frac{11}{100}$  .11  
2. 24%  $\frac{24}{100} \div 2 = \frac{12}{50} \div 2 = \frac{6}{25}$  .24  
3. 75%  $\frac{75}{100} \div 25 = \frac{3}{4}$  .75  
4. 405%  $\frac{405}{100} \times 10 = \frac{405}{1000} \div 5 = \frac{81}{200}$  4.05

Write each fraction as a percent.

5.  $\frac{17}{100} = 17\%$   
6.  $\frac{4}{50} = \frac{8}{100} = 8\%$   
7.  $\frac{3}{10} = \frac{30}{100} = 30\%$   
8.  $\frac{7}{20} = \frac{35}{100} = 35\%$

Write each fraction as a decimal first, then as a percent.

9.  $\frac{10}{40} = .25 = 25\%$   
10.  $\frac{9}{15} = .6 = 60\%$   
11.  $\frac{3}{8} = .375 = 37.5\%$   
12.  $\frac{11}{6} = 1.83 = 183\%$

TIPPING

13. Your friend goes out for pizza and his bill is \$22. He wants to leave a 20% tip. Write a proportion to find the amount of tip that he should leave. Then solve and write your answer in a complete sentence.

Percentage = Bill  
 $\frac{20 \text{ tip}}{100 \text{ total}} = \frac{X \text{ tip}}{22 \text{ total}}$   
 $22 \cdot \frac{20}{100} = \frac{X}{22}$   
 $4.4 = X$

The tip comes out to be \$4.40.

14. You decide to go out to eat. Your bill is \$30, but your service was bad. You decide to only leave a 15% tip today. Write a proportion and solve to find how much you should leave for a tip. Use a complete sentence in your answer.

Percentage = Bill  
 $\frac{15 \text{ tip}}{100 \text{ total}} = \frac{X}{30}$   
 $30 \cdot \frac{15}{100} = \frac{X}{30}$   
 $4.5 = X$

The tip is \$4.50.

15. Your friends goes out to eat and leaves a 20% tip. He forgets how much his bill was, but he knows he left a tip of \$8. How much was his bill? Use a complete sentence in your answer.

Percentage      Bill

$$\frac{20 \text{ tip}}{100 \text{ total}} = \frac{8 \text{ tip}}{x \text{ total}}$$

Still need to solve

16. Write an equation that describes the relationship between your total bill  $b$  and the amount of your tip  $t$ , assuming you always leave a 20% tip.

Percentage

$$b \cdot \frac{20}{100} = \frac{t}{b} \cdot b$$

$$t = \frac{20b}{100}$$

17. Make a graph of the total bill and the amount left for a tip, assuming you always leave a 20% tip.


Variable	Lower Bound	Upper Bound	Interval

