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# Unit 3, Lesson 10: What Are Percentages?

Let's learn about percentages.

## 10.1: Dollars and Cents

Find each answer mentally.

1. A sticker costs 25 cents. How many dollars is that?
2. A pen costs 1.50 dollars. How many cents is that?
3. How many cents are in one dollar?
4. How many dollars are in one cent?

## 10.2: Coins

1. Complete the table to show the values of these U.S. coins.



<b>coin</b>	penny	nickel	dime	quarter	half dollar	dollar
<b>value (cents)</b>						

The value of a quarter is 25% of the value of a dollar because there are 25 cents for every 100 cents.

1 Quarter

1 Dollar

2. Write the name of the coin that matches each expression.

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a. 25% of a dollar

c. 1% of a dollar

e. 10% of a dollar

b. 5% of a dollar

d. 100% of a dollar

f. 50% of a dollar

3. The value of 6 dimes is what **percent** of the value of a dollar?

4. The value of 6 quarters is what percent of the value of a dollar?

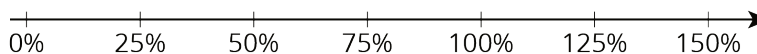
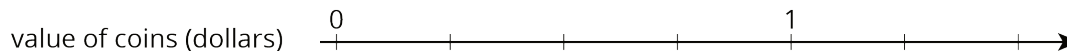
**Are you ready for more?**

Find two different sets of coins that each make 120% of a dollar, where no type of coin is in both sets.

**10.3: Coins on a Number Line**



A \$1 coin is worth 100% of the value of a dollar. Here is a double number line that shows this.



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1. The coins in Jada's pocket are worth 75% of a dollar. How much are they worth (in dollars)?

3. Elena has 3 quarters and 5 dimes. What percentage of a dollar does she have?

2. The coins in Diego's pocket are worth 150% of a dollar. How much are they worth (in dollars)?

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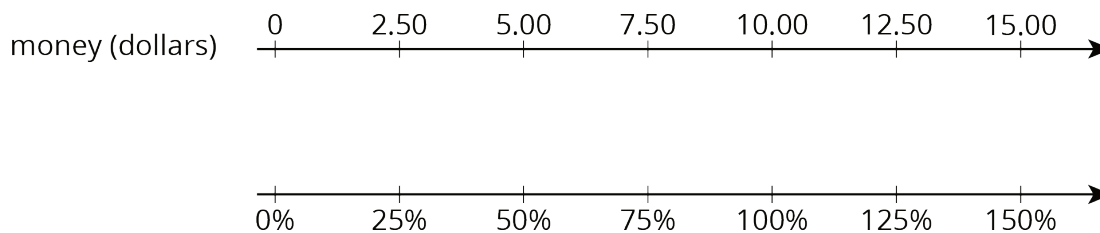
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## Lesson 10 Summary

A **percentage** is a *rate per 100*.

We can find percentages of \$10 using a double number line where 10 and 100% are aligned, as shown here:



Looking at the double number line, we can see that \$5.00 is 50% of \$10.00 and that \$12.50 is 125% of \$10.00.

## Lesson 10 Glossary Terms

- percent
- percentage

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## Unit 3, Lesson 10: What Are Percentages?

1. What percentage of a dollar is the value of each coin combination?

- a. 4 dimes
- b. 1 nickel and 3 pennies
- c. 5 quarters and 1 dime

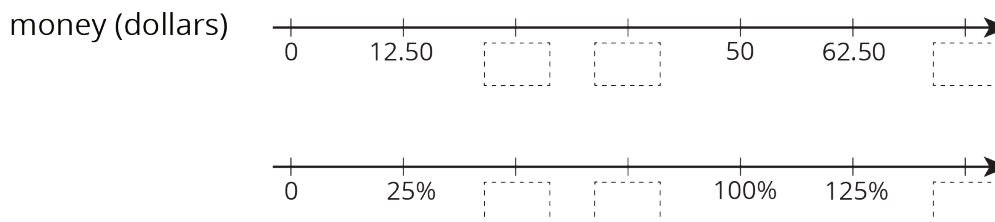
2. a. List three different combinations of coins, each with a value of 30% of a dollar.
- b. List two different combinations of coins, each with a value of 140% of a dollar.

3. The United States government used to make coins of many different values. For each coin, state its worth as a percentage of \$1.



- a.  $\frac{1}{2}$  cent
- b. 3 cents
- c. 20 cents
- d.  $\$2\frac{1}{2}$
- e. \$5

4. Complete the double number to line show percentages of \$50.



5. Elena bought 8 tokens for \$4.40. At this rate:

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a. How many tokens could she buy with \$6.05?

b. How much do 19 tokens cost?

(from Unit 3, Lesson 9)

6. A snail travels 10 cm in 4 minutes. At this rate:

a. How long will it take the snail to travel 24 cm?

b. How far does the snail travel in 6 minutes?

(from Unit 3, Lesson 8)

7. a. 3 tacos cost \$18. Complete the table to show the cost of 4, 5, and 6 tacos at the same rate.

number of tacos	cost in dollars	rate in dollars per taco
3	18	
4		
5		
6		

b. If you buy  $t$  tacos for  $c$  dollars, what is the unit rate?

(from Unit 3, Lesson 7)