## Solve Word Problems Involving Money

## Use What You Know

## You know how to count by ones, fives, and tens.

Lee, Seth, and Jack each have five coins.


Lee


Seth


Jack

Which child has the most cents?
a. Lee has five pennies. Each penny is worth $\qquad$ , $\qquad$ , $\qquad$ , 1 cent. Count by ones to find how many cents she has.
b. Seth has five nickels. Each nickel is worth 5 cents. Count by fives to find how many cents he has.
c. Jack has five dimes. Each dime is worth
$\qquad$
$\qquad$ , $\qquad$ , $\qquad$

10 cents. Count by tens to find how many cents he has.
$\underline{10}, \underline{20}$ $\qquad$ , $\qquad$ ,
d. Who has the most cents? Explain how you know.

## Find Out More

You can learn about the value of money.
Each type of coin and bill has a different value.

| Name | Value | Front | Back |
| :---: | :---: | :---: | :---: |
| penny | $1 \Phi$ |  |  |
| nickel | $5 \ddagger$ |  |  |
| dime | $10 \Phi$ |  |  |
| quarter | $25 \$$ |  |  |

We use $\ddagger$ to show cents and \$ to show dollars. $5 \$$ is five cents. \$5 is five dollars.

A \$1 bill is worth the same amount as 100\$.
There are also other types of bills, such as $\$ 5, \$ 10, \$ 20, \$ 50$, and $\$ 100$.


## Reflect Work with a partner.

1 Talk About lt Each child in the problem on the previous page has five coins. Why don't they all have the same amount of money?

Write About lt $\qquad$

## Learn About Finding the Value of Coins

Read the problem. Then you will explore ways to find the value of the coins.

Erik found some coins on the floor. How many cents did he find?


Picture lt You can sort the coins and think about the value of each coin.

$10 \ddagger$


Model It You can make a model.

| 10 | 10 | 10 | 5 | 5 | 5 | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Model It You can write an addition equation.

$$
10+10+10+5+5+5+1+1=?
$$

## Connect lt Use skip counting and addition to find the value of the coins.

2 Use skip counting to find the value. Each time the coins change, be sure to change what you are counting by.

$\qquad$
$\qquad$
 $10 \$$ 20\$ $\qquad$
$\qquad$
$\qquad$
$\qquad$
3 Erik added the values like this. Fill in the sum.

$\qquad$

4 Draw another set of coins that has the same value as Erik's set of coins.

## Try It Try another problem.

5 Blaire has these coins. How many cents does she have? $\qquad$ ¢

Draw another set of coins that is worth the same amount.

## Learn About Solving Word Problems About Money

Read the problem. Then you will explore ways to solve it.

Liam had a $\$ 100$ bill. Kane had two $\$ 20$ bills and one $\$ 5$ bill. Kane got more bills for his birthday. Then he had the same amount of money as Liam. How much money did Kane get for his birthday?

Model lt You can make a tape diagram and a bar model.

Step 1: Kane had two $\$ 20$ bills and one $\$ 5$ bill.


Step 2: Kane got some more bills. Then he had \$100.


## Model It You can use open number lines.

Step 1: Kane had two $\$ 20$ bills and one $\$ 5$ bill.


Step 2: Kane got some more bills. Then he had \$100.


## Connect lt Use the models to solve the problem.

6 What do you find in Step 1?

7 Write an addition equation for Step 1.

$$
+\ldots+
$$

8 How much money did Kane have after his birthday? How do you know?
$\qquad$
$\qquad$
9 What do you find in Step 2?

10 Write a subtraction equation for Step 2.
$\qquad$
11 How much money did Kane get for his birthday? Draw a set of bills that he could have received.

## Try It Try another problem.

12 Izzy has two $\$ 10$ bills and three $\$ 5$ bills. Matt has two $\$ 5$ bills and a $\$ 20$ bill. Who has more money? How much more? Show your work.

## Practice Solving Word Problems About Money

## Study the model below. Then solve Problems 13-15.

## Example

Paige has two quarters, one dime, and one nickel. Andre has six dimes. Which set of coins is worth more? How much more?

You can show your work with models.

Paige \begin{tabular}{|c|c|c|c|c|c|c|}
\hline \multicolumn{2}{|c|}{25} \& \multicolumn{2}{|c|}{25} \& 10 \& 5 <br>

\hline | 10 | 10 | 10 | 10 | 10 |
| :---: | :---: | :---: | :---: | :---: |
| Andre | 10 |  |  |  | <br>

$65-60=5$
\end{tabular}

Answer Paige's set of coins is worth $5 \$$ more than Andre's.

13 Anthony has $\$ 25$ in bills. Name two ways he could have \$25.

Show your work.


Think about ways you could use \$1, \$5, \$10, and $\$ 20$ bills to add up to $\$ 25$.

## Answer

$\qquad$
$\qquad$

14 A pen costs 354. Logan paid with two quarters. What coins could Logan get back as change?
Show your work.


What are two quarters worth? How do you figure out the change Logan should get?

## Answer

$\qquad$

15 Johanna has these coins in her pocket.


How much are the coins worth?
Try skip counting to find the total.

A 8 8
B $40 \$$
C $80 \$$
D $\$ 2$
Mary chose C as the answer. This answer is wrong.
How did Mary get her answer?
$\qquad$
$\qquad$

## Practice Solving Word Problems About Money

## Solve the problems.

1 What is the total value of these coins? Circle the correct answer.
A $52 \Phi$
C 67థ
B $62 \Phi$
D 77థ


2 A bookmark costs 68 . Haley uses 3 quarters to pay for it. Which coins should she get back in change?
Circle the correct answer.
A

B 0 -
c 0
D -5$)=0$

3 Circle True or False for each statement.
a. A dime is worth the same as ten pennies.
b. A nickel is worth the same as two dimes.
c. A quarter is worth the same as five nickels.
d. A quarter is worth the same as two dimes and one nickel.

True False
True False
True False
True False

4 Which set of coins is worth 31\$?
Circle all the correct answers.


5 Tess has more than three bills. They have a total value of $\$ 30$. What bills could Tess have?

Show your work.

6 Jim answers Problem 5. He says Tess could have four $\$ 10$ bills. Do you agree? Explain why or why not.
$\qquad$
$\qquad$
$\qquad$

Self Check Now you can solve problems using money. Fill this in on the progress chart on page 153.

