

## U.S. Currency Reference Sheet

DC 1

### U.S. Paper Currency

**Important Note:** These are just illustrations designed to show approximately what modern U.S. Currency looks like. Paper bills have been issued in several different designs over the years, so you may encounter older versions that look much different.

**One-Dollar Bill** George Washington

\$1



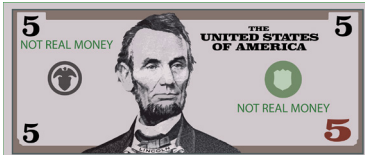
**Two-Dollar Bill** Thomas Jefferson

\$2



**Five-Dollar Bill** Abraham Lincoln

\$5



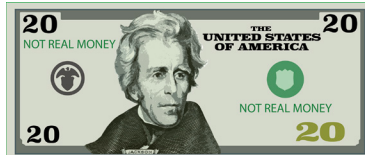
**Ten-Dollar Bill** Alexander Hamilton

\$10



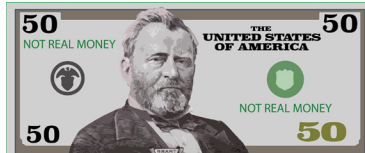
**Twenty-Dollar Bill** Andrew Jackson

\$20



**Fifty-Dollar Bill** Ulysses S. Grant

\$50



**One-Hundred-Dollar Bill** Benjamin Franklin

\$100



### U.S. Coins

**Important Note:** These are actual photographs of common versions of U.S. coins. Metal coins have been issued with many different engravings, but the size and color are more consistent. Since the main focus here is math, the most important thing is the numerical value of each coin.

**Penny**

Value in Dollars

1¢



$\frac{1}{100}$  \$0.01

**Nickel**

5¢



$\frac{5}{100}$  \$0.05

**Dime**

10¢



$\frac{10}{100}$  \$0.10

**Quarter**

25¢



$\frac{25}{100}$  \$0.25

**Half-Dollar**

50¢



$\frac{50}{100}$  \$0.50

**Silver Dollar**

100¢



$\frac{100}{100}$  \$1.00

## Adding Dollars

DC 2

**Instructions:** Calculate the total value of each group of dollars. Don't forget to use the dollar sign in your answer.

1 \$12



$$5 + 5 = 10$$



$$1 + 1 = 2$$

$$10 + 2 = 12$$

2 \$18



$$10 + 5 = 15$$



$$1 + 1 + 1 = 3$$

$$15 + 3 = 18$$

3 \$32



$$20 + 10 = 30$$



$$1 + 1 = 2$$

$$30 + 2 = 32$$

4 \$55



$$20 + 20 = 40$$



$$10 + 5 = 15$$

$$40 + 15 = 55$$

5 \$67



$$50 + 10 = 60$$



$$5 + 1 + 1 = 7$$

$$60 + 7 = 67$$

6 \$160



$$50 + 50 = 100$$



$$20 \times 3 = 60$$

$$100 + 60 = 160$$

7 \$175



$$100 + 50 = 150$$



$$20 + 5 = 25$$

$$150 + 25 = 175$$

8 \$450



$$100 \times 3 = 300$$



$$50 \times 3 = 150$$

$$300 + 150 = 450$$

## Adding Cents

DC 3

**Instructions:** Calculate the total value of each group of coins. Don't forget to use the cents sign in your answer. **Note:** You can use the reference sheet on page 1 to help you identify the coins.

1 17¢



$$\begin{aligned} 5 + 10 &= 15 & 1 + 1 &= 2 \\ 15 + 2 &= 17 \end{aligned}$$

2 30¢



$$\begin{aligned} 5 + 5 &= 10 & 10 + 10 &= 20 \\ 10 + 20 &= 30 \end{aligned}$$

3 31¢



$$25 + 5 + 1 = 31$$

4 47¢



$$\begin{aligned} 25 & & 10 + 10 + 1 + 1 &= 22 \\ 25 + 22 &= 47 \end{aligned}$$

5 35¢



$$\begin{aligned} 3 \times 5 &= 15 & 2 \times 10 &= 20 \\ 15 + 20 &= 35 \end{aligned}$$

6 77¢



$$\begin{aligned} 3 \times 25 &= 75 & 1 + 1 &= 2 \\ 75 + 2 &= 77 \end{aligned}$$

7 41¢



$$\begin{aligned} 25 + 10 &= 35 & 5 + 1 &= 6 \\ 35 + 6 &= 41 \end{aligned}$$

8 95¢



$$\begin{aligned} 3 \times 25 &= 75 & 2 \times 10 &= 20 \\ 75 + 20 &= 95 \end{aligned}$$


## Writing Cents as Fractions of Dollars

DC 4


**Instructions:** Remember that cents can be written as fractions of a dollar. Write the value of these six U.S. coins as fractions of a dollar, and then write that amount in decimal form using the dollar sign.


1  One Penny =  $\frac{1}{100}$  of a dollar. In decimal form: \$0.01

2  One Nickel =  $\frac{5}{100}$  of a dollar. In decimal form: \$0.05

3  One Dime =  $\frac{10}{100}$  of a dollar. In decimal form: \$0.10

4  One Quarter =  $\frac{25}{100}$  of a dollar. In decimal form: \$0.25

5  One Half-Dollar =  $\frac{50}{100}$  of a dollar. In decimal form: \$0.50

6  One Silver Dollar =  $\frac{100}{100}$  of a dollar. In decimal form: \$1.00

**Instructions:** Write each sum of money as a dollar amount. (i.e. use decimal form and the dollar sign.)

1 200 pennies \$2.00

2 235 pennies \$2.35

3 12 dimes \$1.20  
 $12 \times 10 = 120$  cents

4 40 dimes \$4.00  
 $40 \times 10 = 400$  cents

5 675 pennies \$6.75

6 15 nickels \$0.75  
 $15 \times 5 = 75$  cents

7 1,000 pennies \$10.00

8 100 dimes \$10.00  
 $100 \times 10 = 1,000$  cents

## Adding Dollars and Cents

DC 5

**Instructions:** Calculate the total value of each group of currency. Write your answer in terms of dollars.

1 \$21.16



$$20 + 1 = \$21$$



$$10 + 5 + 1 = 16¢ \text{ or } \$0.16$$

2 \$20.75



$$10 + 10 = \$20$$



$$3 \times 25 = 75¢ \text{ or } \$0.75$$

3 \$35.40



$$20 + 10 + 5 = \$35$$



$$4 \times 10 = 40¢ \text{ or } \$0.40$$

4 \$41.50



$$20 + 20 + 1 = \$41$$



$$2 \times 25 = 50¢ \text{ or } \$0.50$$

5 \$75.08



$$50 + 20 + 5 = \$75$$



$$5 + 3 = 8¢ \text{ or } \$0.08$$

6 \$105.42



$$100 + 5 = \$105$$



$$25 + 10 + 5 + 2 = 42¢ \text{ or } \$0.42$$

7 \$155.35



$$100 + 50 + 5 = \$155$$



$$25 + 10 = 35¢ \text{ or } \$0.35$$

8 \$7.00



$$5 + 1 = \$6$$



$$4 \times 25 = 100¢ \text{ or } \$1.00$$

## Different Ways to get the Same Amount (Dollars)

DC 6

**Instructions:** Draw simple diagrams to show two different ways to represent the amount of money shown using paper currency. **Note:** Answers will vary. You can use the \$2 bill if you want to.

1 \$30

way 1  $\boxed{\$20} + \boxed{\$10} = \$30$

way 2  $\boxed{\$10} + \boxed{\$10} + \boxed{\$10} = \$30$

2 \$12 answers will vary, here are some possibilities

way 1  $\boxed{\$10} + \boxed{\$1} + \boxed{\$1} = \$12$

way 2  $\boxed{\$5} + \boxed{\$5} + \boxed{\$2} = \$12$

3 \$42 answers will vary, here are some possibilities

way 1  $\boxed{\$20} + \boxed{\$20} + \boxed{\$1} + \boxed{\$1} = \$42$

way 2  $\boxed{\$20} + \boxed{\$10} + \boxed{\$10} + \boxed{\$2} = \$42$

4 \$65 answers will vary, here are some possibilities

way 1  $\boxed{\$20} + \boxed{\$20} + \boxed{\$20} + \boxed{\$5} = \$65$

way 2  $\boxed{\$50} + \boxed{\$10} + \boxed{\$5} = \$65$

5 \$115 answers will vary, here are some possibilities

way 1  $\boxed{\$100} + \boxed{\$5} + \boxed{\$5} + \boxed{\$5} = \$115$

way 2  $\boxed{\$50} + \boxed{\$50} + \boxed{\$10} + \boxed{\$5} = \$115$

6 \$71 answers will vary, here are some possibilities

way 1  $\boxed{\$50} + \boxed{\$20} + \boxed{\$1} = \$71$

way 2  $\boxed{\$50} + \boxed{\$10} + \boxed{\$10} + \boxed{\$1} = \$71$

## Different Ways to get the Same Amount (Cents)

DC 7

**Instructions:** Draw simple diagrams to show two different ways to represent the amount of money shown using metal coins. **Note:** Answers will vary. You can use the half-dollar if you want to.

**1** 27¢ way 1



1 quarter + 2 pennies

way 2



2 dimes + 1 nickel + 2 pennies

**2** 60¢

answers will vary, here are some possibilities

way 1



2 quarters + 1 dime

way 2



1 half-dollar + 2 nickels

**3** 33¢

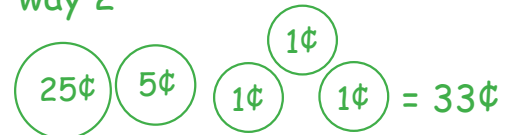
answers will vary, here are some possibilities

way 1



3 dimes + 3 pennies

way 2



1 quarter + 1 nickel + 3 pennies

**4** 42¢

answers will vary, here are some possibilities

way 1



4 dimes + 2 pennies

way 2



1 quarter + 1 dime + 1 nickel + 2 pennies

**5** 85¢

answers will vary, here are some possibilities

way 1



3 quarters + 1 dime

way 2



1 half-dollar + 3 dimes + 1 nickel

## Most Efficient Way (Dollars & Cents)

DC 8

**Instructions:** Draw simple diagrams to show the most efficient way to represent the amount of money shown using a combination of paper bills and metal coins. In this case, "most efficient" means using the fewest number of bills and coins. **Note:** For this set, **don't use** the \$2 bill or the half-dollar.

1 \$15.76

Bills	Coins
<div style="display: flex; align-items: center; gap: 10px;"> <div style="border: 1px solid #e67e22; padding: 5px; display: inline-block;">\$10</div> <div style="font-size: 24px;">+</div> <div style="border: 1px solid #e67e22; padding: 5px; display: inline-block;">\$5</div> </div>	<div style="display: flex; align-items: center; gap: 10px;"> <div style="border: 1px solid #e67e22; border-radius: 50%; padding: 5px; display: inline-block;">25¢</div> <div style="font-size: 24px;">+</div> <div style="border: 1px solid #e67e22; border-radius: 50%; padding: 5px; display: inline-block;">25¢</div> <div style="font-size: 24px;">+</div> <div style="border: 1px solid #e67e22; border-radius: 50%; padding: 5px; display: inline-block;">25¢</div> <div style="font-size: 24px;">+</div> <div style="border: 1px solid #e67e22; border-radius: 50%; padding: 5px; display: inline-block;">1¢</div> </div>
= \$15.76	
1 ten + 1 five	3 quarters + 1 penny

2 \$25.30

Bills	Coins
<div style="display: flex; align-items: center; gap: 10px;"> <div style="border: 1px solid #27ae60; padding: 5px; display: inline-block;">\$20</div> <div style="font-size: 24px;">+</div> <div style="border: 1px solid #27ae60; padding: 5px; display: inline-block;">\$5</div> </div>	<div style="display: flex; align-items: center; gap: 10px;"> <div style="border: 1px solid #27ae60; border-radius: 50%; padding: 5px; display: inline-block;">25¢</div> <div style="font-size: 24px;">+</div> <div style="border: 1px solid #27ae60; border-radius: 50%; padding: 5px; display: inline-block;">5¢</div> </div>
= \$25.30	
1 twenty + 1 five	1 quarter + 1 nickel

3 \$60.40

Bills	Coins
<div style="display: flex; align-items: center; gap: 10px;"> <div style="border: 1px solid #27ae60; padding: 5px; display: inline-block;">\$50</div> <div style="font-size: 24px;">+</div> <div style="border: 1px solid #27ae60; padding: 5px; display: inline-block;">\$10</div> </div>	<div style="display: flex; align-items: center; gap: 10px;"> <div style="border: 1px solid #27ae60; border-radius: 50%; padding: 5px; display: inline-block;">25¢</div> <div style="font-size: 24px;">+</div> <div style="border: 1px solid #27ae60; border-radius: 50%; padding: 5px; display: inline-block;">10¢</div> <div style="font-size: 24px;">+</div> <div style="border: 1px solid #27ae60; border-radius: 50%; padding: 5px; display: inline-block;">5¢</div> </div>
= \$60.40	
1 fifty + 1 ten	1 quarter + 1 dime + 1 nickel

4 \$80.80

Bills	Coins
<div style="display: flex; align-items: center; gap: 10px;"> <div style="border: 1px solid #27ae60; padding: 5px; display: inline-block;">\$50</div> <div style="font-size: 24px;">+</div> <div style="border: 1px solid #27ae60; padding: 5px; display: inline-block;">\$20</div> <div style="font-size: 24px;">+</div> <div style="border: 1px solid #27ae60; padding: 5px; display: inline-block;">\$10</div> </div>	<div style="display: flex; align-items: center; gap: 10px;"> <div style="border: 1px solid #27ae60; border-radius: 50%; padding: 5px; display: inline-block;">25¢</div> <div style="font-size: 24px;">+</div> <div style="border: 1px solid #27ae60; border-radius: 50%; padding: 5px; display: inline-block;">25¢</div> <div style="font-size: 24px;">+</div> <div style="border: 1px solid #27ae60; border-radius: 50%; padding: 5px; display: inline-block;">25¢</div> <div style="font-size: 24px;">+</div> <div style="border: 1px solid #27ae60; border-radius: 50%; padding: 5px; display: inline-block;">5¢</div> </div>
= \$80.80	
1 fifty + 1 twenty + 1 ten	3 quarters + 1 nickel

5 \$250.45

Bills	Coins
<div style="display: flex; align-items: center; gap: 10px;"> <div style="border: 1px solid #27ae60; padding: 5px; display: inline-block;">\$100</div> <div style="font-size: 24px;">+</div> <div style="border: 1px solid #27ae60; padding: 5px; display: inline-block;">\$100</div> <div style="font-size: 24px;">+</div> <div style="border: 1px solid #27ae60; padding: 5px; display: inline-block;">\$50</div> </div>	<div style="display: flex; align-items: center; gap: 10px;"> <div style="border: 1px solid #27ae60; border-radius: 50%; padding: 5px; display: inline-block;">25¢</div> <div style="font-size: 24px;">+</div> <div style="border: 1px solid #27ae60; border-radius: 50%; padding: 5px; display: inline-block;">10¢</div> <div style="font-size: 24px;">+</div> <div style="border: 1px solid #27ae60; border-radius: 50%; padding: 5px; display: inline-block;">10¢</div> </div>
= \$250.45	
2 hundreds + 1 fifty	1 quarter + 2 dimes

## Money Q & A

DC 9

**Instructions:** Answer each of these questions about money. Don't forget to use the dollar sign or cents sign where needed.

1 How many pennies does it take to equal the same value as a one-dollar bill? **100**

2 If you have 8 five-dollar bills, how much money is that?  $8 \times \$5 =$  **\$40** (or \$40.00)

3 How many twenty-dollar bills would it take to equal \$100? **5**  $5 \times \$20 = \$100$

4 How many five-dollar bills would it take to equal \$20? **4**  $4 \times \$5 = \$20$

5 If you have 512 pennies, what is the equivalent value in dollars? **\$5.12**  $512 \div 100 = 5.12$

6 If you have 12 nickels, how much is that in dollars? **\$0.60**  $12 \times 5\text{¢} = 60\text{¢}$   
 $60\text{¢} \div 100 = \$0.60$

7 How many one-hundred-dollar bills would it take to equal \$1,000? **10**  $10 \times \$100 = \$1,000$

8 Which is greater: 14 nickels or 3 quarters? **3 quarters**  $14 \times 5\text{¢} = 70\text{¢}$   
 $3 \times 25\text{¢} = 75\text{¢}$   
 $75\text{¢} > 70\text{¢}$

9 If you have 10 quarters, how much is that in dollars? **\$2.50**  $10 \times 25\text{¢} = 250\text{¢}$   
 $250\text{¢} \div 100 = \$2.50$

10 How many quarters would you need to equal the same value as \$10? **40**

4 quarters = \$1, so you'd need  
10 times that amount

$$10 \times 4 = 40$$