



POWER Consumer BASICS Mathematics



Student Resource

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1 2 3 4 5 6 7 8 9 10

ISBN 978-0-8251-9315-6

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J. Weston Walch, Publisher

40 Walch Drive • Portland, ME 04103

www.walch.com

Printed in the United States of America



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To the Student

Welcome to *Power Basics*® *Consumer Mathematics*. This is a book designed to help you learn, step by step, about basic money management skills.

Unit 1 of this book, **Dollars and Sense**, will show you how to identify the most commonly used coins and bills. You will learn how to add, subtract, multiply, and divide amounts of money.

Unit 2, Spending Wisely, will teach you how to get the best value for your money when you shop. You will also learn how to create and balance a personal budget.

Unit 3, Borrowing Wisely, will teach you about different kinds of loans. You will also learn how to establish good credit and avoid getting into too much debt.

Unit 4, Banking, Insurance, and Taxes, will teach you how to earn the most interest on the money in your savings account. You will learn how to fill out W-4 forms, read W-2 forms, and file a tax return. You will also learn about different types of insurance.

Many special features in these pages make learning easier. “Tips” give you hints on mastering the ideas and facts more quickly. “Think About It” questions ask you to look at money management in new ways. “In Real Life” sections show you how the skills you’re learning are applied in the world around you. All the terms in the “Words to Know” section at the start of each lesson includes important new terms introduced in the lesson. The first time each word is used it is defined for you. The first use appears in **bold type**. All the words in the “Words to Know” sections are also defined in the Glossary at the end of the book. Station-based activities help you extend concepts introduced in the lessons. Finally, every unit ends with a Unit Review. These tests will help you check up on what you have just learned.

As you move through the *Power Basics*® *Consumer Mathematics*, you will become a more confident and skillful manager of your financial life. We hope that you enjoy this material as you learn.

UNIT 1

Dollars and Sense



LESSON 1: Coins

GOAL: To learn to identify commonly used coins and their values

WORDS TO KNOW

cent

dollar

penny

cent sign

dollar sign

quarter

dime

nickel

Pennies and Cents

Look at this coin:



It is a **penny**.

A penny is worth 1 **cent**.

$$1 \text{ penny} = 1 \text{ cent}$$

Below are 5 pennies.



5 pennies are worth 5 cents.

$$5 \text{ pennies} = 5 \text{ cents}$$

A short way to write “cents” is with the **cent sign** (¢).

$$1 \text{ penny} = 1 \text{ cent} = 1¢$$

$5 \text{ pennies} = 5 \text{ cents} = 5\text{¢}$

$40 \text{ pennies} = 40 \text{ cents} = 40\text{¢}$

$10 \text{ pennies} = 10 \text{ cents} = 10\text{¢}$

$51 \text{ pennies} = 51 \text{ cents} = 51\text{¢}$

$13 \text{ pennies} = 13 \text{ cents} = 13\text{¢}$

$66 \text{ pennies} = 66 \text{ cents} = 66\text{¢}$

$15 \text{ pennies} = 15 \text{ cents} = 15\text{¢}$

$75 \text{ pennies} = 75 \text{ cents} = 75\text{¢}$

$22 \text{ pennies} = 22 \text{ cents} = 22\text{¢}$

$80 \text{ pennies} = 80 \text{ cents} = 80\text{¢}$

$38 \text{ pennies} = 38 \text{ cents} = 38\text{¢}$

$99 \text{ pennies} = 99 \text{ cents} = 99\text{¢}$

■ PRACTICE 1: Pennies and Cents

Use the cent sign (¢) to write each amount of money below. Write your answer on the line after each equal sign.

Example: 5 pennies = 5¢

1. 15 pennies = _____

2. 23 pennies = _____

3. 51 pennies = _____

4. 67 pennies = _____

5. 84 pennies = _____

Dollars and Cents

This is a **dollar**:



One dollar is equal to 100 cents.

$1 \text{ dollar} = 100 \text{ cents} = 100\text{¢}$

$6 \text{ dollars} = 600 \text{ cents} = 600\text{¢}$

$2 \text{ dollars} = 200 \text{ cents} = 200\text{¢}$

$7 \text{ dollars} = 700 \text{ cents} = 700\text{¢}$

$3 \text{ dollars} = 300 \text{ cents} = 300\text{¢}$

$8 \text{ dollars} = 800 \text{ cents} = 800\text{¢}$

$4 \text{ dollars} = 400 \text{ cents} = 400\text{¢}$

$9 \text{ dollars} = 900 \text{ cents} = 900\text{¢}$

$5 \text{ dollars} = 500 \text{ cents} = 500\text{¢}$

A short way to write “dollars” is with the **dollar sign** (\$).

$1 \text{ dollar} = \$1.00$

$6 \text{ dollars} = \$6.00$

$2 \text{ dollars} = \$2.00$

$7 \text{ dollars} = \$7.00$

$3 \text{ dollars} = \$3.00$

$8 \text{ dollars} = \$8.00$

$4 \text{ dollars} = \$4.00$

$9 \text{ dollars} = \$9.00$

$5 \text{ dollars} = \$5.00$

■ PRACTICE 2: Dollars and Cents

Look at each amount of money below written with the cent sign (¢). Write the amount in dollars with the dollar sign (\$). Put your answer on the line after each equal sign.

Example: $300\text{¢} = \$3.00$

1. $500\text{¢} = \underline{\hspace{2cm}}$

2. $400\text{¢} = \underline{\hspace{2cm}}$

3. $900\text{¢} = \underline{\hspace{2cm}}$

4. $800\text{¢} = \underline{\hspace{2cm}}$

5. $700\text{¢} = \underline{\hspace{2cm}}$

More Dollars and Cents

Amounts less than one dollar can be written with the cent sign (¢).

Look at the examples below.

Example 1

1¢

12¢

95¢

6¢

You can also write these amounts with the dollar sign. If there is less than 10¢, write a 0 before the number of cents:

Example 2

1¢ = \$.01

12¢ = \$.12

95¢ = \$.95

6¢ = \$.06

Notice there is a decimal point (.) and 2 numbers after the decimal point in each amount:

decimal point



\$.01

2 numbers after decimal point

.01 means “one hundredth.”

One cent is equal to 1 hundredth of a dollar. This is because there are 100 cents in a dollar.

$$1¢ = \$\frac{1}{100}$$

TIP



When you write amounts less than \$1.00, you must use either the dollar sign (\$) with a decimal point or the cent sign (¢). Never use the dollar sign or decimal point and the cent sign. For example:

35¢ OR \$.35

NOT .35¢

NOT \$35¢

NOT \$.35¢

■ PRACTICE 3: More Dollars and Cents

Look at each amount written with the cent sign (¢) below. Write it with the dollar sign (\$). Remember to use 2 numbers after the decimal point. Write your answer on the line after each equal sign.

Example: $56¢ = \$.56$

- $7¢ = \underline{\hspace{2cm}}$
- $18¢ = \underline{\hspace{2cm}}$
- $33¢ = \underline{\hspace{2cm}}$
- $4¢ = \underline{\hspace{2cm}}$
- $29¢ = \underline{\hspace{2cm}}$
- $61¢ = \underline{\hspace{2cm}}$
- $2¢ = \underline{\hspace{2cm}}$

Nickels, Dimes, and Quarters

Three other coins besides the penny are used every day: the **nickel**, the **dime**, and the **quarter**.

This coin is a nickel:



The nickel is worth 5 pennies, or 5 cents.

$$1 \text{ nickel} = 5¢ = \$.05$$

A nickel equals 5 hundredths of a dollar.

$$5¢ = \$\frac{5}{100} = \$.05$$

There are 20 nickels in one dollar.

$$\begin{array}{r} \$.05 \\ \times 20 \\ \hline \$1.00 \end{array}$$

Now look at the coin below. This coin is a dime:



A dime is worth 10 pennies, or 10 cents.

$$1 \text{ dime} = 10\text{¢} = \$.10$$

A dime equals 10 hundredths of a dollar.

$$10\text{¢} = \$\frac{10}{100} = \$.10$$

There are 10 dimes in one dollar.

$$\begin{array}{r} \$.10 \\ \times 10 \\ \hline \$1.00 \end{array}$$

Here is the third coin. This coin is a quarter:



A quarter is worth 25 pennies, or 25 cents.

$$1 \text{ quarter} = 25\text{¢} = \$.25$$

A quarter equals 25 hundredths of a dollar.

$$25\text{¢} = \$\frac{25}{100} = \$.25$$

There are 4 quarters in one dollar.

$$\begin{array}{r} \$.25 \\ \times 4 \\ \hline \$1.00 \end{array}$$

IN REAL LIFE



Dana has been saving for a new pair of wireless headphones. She has been throwing her loose change into a jar every day for the past six months. Today is the day she will count the money. Her kitchen table is covered with coins. How will she count them all? She decides to sort them all out. She makes separate stacks of quarters, dimes, and nickels. The quarters are in stacks of four. So each stack of quarters equals \$1.00 ($$.25 \times 4 = \1.00). The dimes are in stacks of ten. So each stack of dimes equals \$1.00 ($$.10 \times 10 = \1.00). The nickels are in stacks of ten. So each stack of nickels equals 50¢, or \$.50 ($$.05 \times 10 = \$.50$). Now it's easy for Dana to count her coins.

PRACTICE 4: Nickels, Dimes, and Quarters

Solve each problem below. Write your answer on the line at the end of each question.

1. How many quarters are there in one dollar? _____
2. A quarter is equal to how many hundredths of a dollar? _____
3. How many pennies are there in one dollar? _____
4. A penny is equal to how many hundredths of a dollar? _____
5. How many dimes are there in one dollar? _____

More Practice with Nickels, Dimes, and Quarters

Different coins can add up to the same amount.

Look at the following example.

Example 1

One quarter is worth \$.25 (or 25¢).

Two dimes and a nickel are worth the same as a quarter.

$$\begin{array}{r} \$.10 = 1 \text{ dime} \\ \$.10 = 1 \text{ dime} \\ +\$.05 = 1 \text{ nickel} \\ \hline \$.25 \end{array}$$

Look at another example.

Example 2

Two quarters are worth \$.50 (or 50¢).

$$\begin{array}{r} \$.25 = 1 \text{ quarter} \\ \times 2 \\ \hline \$.50 \end{array}$$

Five dimes are worth the same as two quarters.

$$\begin{array}{r} \$.10 = 1 \text{ dime} \\ \times 5 \\ \hline \$.50 \end{array}$$

■ THINK ABOUT IT



Why do you think the 25¢ coin is called a quarter? Write your answer on a separate sheet of paper.

■ PRACTICE 5: More Practice with Nickels, Dimes, and Quarters

Add the coins together in each problem below. Write their total with the dollar sign (\$) on the line after each equal sign.

Example: 1 dime and 1 nickel = \$.15

1. 2 nickels and 1 penny = _____
2. 1 quarter and 2 dimes = _____
3. 1 dime and 2 nickels = _____
4. 10 dimes = _____
5. 3 quarters and 2 pennies = _____