

# **Second Grade Module 4**

## **Money and Word Problems**

### **Teacher Script Answer Key**

#### **Introduction**

- All bracketed text should not be read aloud and is for reference only.
- The questions and answers have been numbered in this document to aid teachers and parents. However, the questions are not numbered the same way, if numbered at all, in the student documents.
- Throughout the script, it is assumed that the student is correct. The teacher may need to go off script if the student does not answer a question correctly.

#### **Section 1: Exploring and Sorting Coins**

##### **Section 1 Materials**

- 5 pennies, 5 nickels, 5 dimes, and 5 quarters in a container
- 4 additional empty containers labeled quarters, dimes, nickels, and pennies (Alternative: sorting tray with four compartments labeled quarters, dimes, nickels, and pennies)
- Money jar, piggy bank, coin purse, or wallet

##### **Section 1 Teacher Notes**

- Use real money throughout the module, instead of play money. Plastic play coins do not feel, weigh, or smell like actual coins. Using real money will allow students to learn how to tactually identify coins. This is an important foundational skill.
- When asking the student what they notice about the coins in the container, student responses may vary. Helping hints may be offered as needed. If the student has residual vision, information about the color of the coins can also be shared. If the student has an electronic magnifier, it can be used to visually look at the coins, including the pictures and words on each coin.
- Talking about the salient features of each coin may be helpful, especially if students are struggling to identify a coin.
- If preferred, additional coins can be added before beginning to sort the money. This activity may also be repeated if the student needs additional practice. After sorting the coins, count the piles of coins.

- The sorting activity can also be extended by completing the activity again while using a timer to encourage the student to quickly identify each coin.
- It may also be helpful to bring a money jar, piggy bank, coin purse, or wallet for the student to explore and then discuss the advantages and disadvantages of each. The activity may also be extended by helping the student to store their money in a wallet/coin purse or make small purchases at a school store or lunchroom.
- When asking the student about the importance of learning about money and how to store it, student responses may vary. Helping hints can be offered as needed.

## **Section 1 Teacher Script**

It is time to get on the road again! Let's begin our journey by learning about money.

There are two forms of money – coins and bills. Begin by exploring the coins in the container.

What did you notice about the coins?

Yes, the coins are different sizes, and some of them have ridged edges while others have a smooth edge.

Have you used coins before? If so, when have you used coins?

Sometimes I use coins to buy a drink or a snack from a vending machine. I have also used coins to buy bananas at a store. When I have a lot of coins, I have also purchased a drink or a small snack at a fast food restaurant.

Where else could we use coins?

Excellent! Explore this coin. It is called a quarter, and it is worth 25 cents. Describe how the quarter feels.

Yes, it has ridges around its edge and is larger than the other coins. Four quarters make a dollar. Now see if you can find another quarter in the pile of coins in the container.

Way to go! Try to find at least one more quarter!

Now explore a dime. It is worth 10 cents. Tell me how the dime feels.

Yes, it also has ridges around its edge, and it is much smaller than the quarter. The dime is also lighter than the quarter.

Now find a dime in the pile of coins.

You did it! Ten dimes make a dollar. Now I would like for you to find another dime.

Excellent! The next coin that we will explore is called a nickel.

A nickel is worth 5 cents. How does it feel to you?

A nickel feels smooth on its edge because it does not have ridges, and it is smaller than a quarter, but bigger than a dime.

Good work! It takes twenty nickels to make a dollar! Now see if you can find two more nickels.

Fantastic! The last coin that we will explore is called a penny.

It is worth 1 cent. Describe how the penny feels.

A penny feels smooth on its edge because it does not have ridges, and it is smaller than a quarter and a nickel, but bigger than a dime.

Now find three pennies in the pile of coins.

Good job of locating three pennies! It takes 100 pennies to make a dollar.

### **Fun Fact 1**

The first coins were made in Lydia (modern Turkey) more than 2,500 years ago.

Now put all the coins back into the container so that we can sort them, using four additional containers. I will help you if needed.

Notice that I have labeled the containers. From left to right, the containers are labeled quarters, dimes, nickels, and pennies.

Now select a coin and see if you can figure out what kind of coin it is. Then place the coin in the container with the matching label. For example, if the coin is a penny, then place it in the penny container.

Good job, coin sorter! Now let's count how many coins we have in each bucket!

Yes, we have 5 quarters, 5 dimes, 5 nickels, and 5 pennies.

Why do you think it is important to learn about money?

By learning about money, you will be able to buy items independently. It will also help you understand how to wisely use and save money.

As you get older, you will need to make important decisions about how you would like to use your money. For example, do you want to save money to buy a drink from the vending machine every Friday or perhaps to buy a present for a friend? It may take you longer to save for a present rather than buying a soda.

How much do you think it costs to buy a drink from a vending machine?

Yes, it usually costs one to two dollars to buy a drink from a vending machine. Do you think it costs more or less than a dollar to purchase a stuffed animal?

Yes, it will take more than one dollar to purchase a stuffed animal, even a small one.

Where can we store our money, especially our coins?

At home, I have a coin "jar". It is not really a jar. It is really a butter container that I cleaned. I keep it in a special place and at the end of the day, I place any coins that I have in it.

It helps me to store my coins in one place. So if I need 4 quarters, I know exactly where to look!

Where is another place I could keep my coins?

Yes, I can also keep money in a wallet, coin purse, or piggy bank.

## **Fun Fact 2**

Some people like to collect old coins.

## **Section 2: Reading the Cent Sign**

### **Section 2 Materials**

- Student Braille Document: G2-M4-Student-Materials.brf
- Activity 1: same as document used in the rest of Section 2

## Section 2 Teacher Note

Ensure that the student knows how to read monetary expressions with a cent sign. For example, 25¢ would be read as twenty-five cents, and 10¢ would be read as ten cents.

## Section 2 Teacher Script

For the second part of our journey, let's learn more about coins, specifically the Nemeth symbol for cent. Begin by reading the title at the top of the braille page.

Yes, it says Second Grade Module 4 Money and Word Problems.

Now, move your hands down to the next line of braille on the page. It begins in cell 5, and it says Section 2. Afterwards, there is a two-cell symbol.

What is this symbol called and what is its purpose?

[dots 4-5-6, dots 1-4-6]

You got it! It is called an opening Nemeth Code indicator, and it tells us that we are going to read math or science.

### Fun Fact 3

The first person known to collect coins was the emperor of Rome, Augustus Caesar, more than 2,000 years ago!

Softly glide your fingers across the next line of braille. In the middle of the line, you will find the Nemeth symbol for cent. It takes two cells to write the cent sign. It is written with dot 4 in the first cell, followed by dots 1-4 in the second cell. There is a line of dots 2-5 before and after the symbol.

You can also think of the symbol as dot 4, followed by the letter c. Why do you think the letter c is used as part of the symbol for cent?

Yes, the word cent begins with the letter c. In addition, the print symbol for a cent includes a letter “c” with a line drawn through it.

## Practice 2.1

Now it is your turn to find the cent symbol in each line of braille. Move your fingers lightly across the line of braille and say "cent" when you locate the symbol!

[Seven lines of dots 2-5 on page 1 with one or two symbols for cents inserted in each line.]

[illegible]

### Answer 2.1

The student will say “cent” each time they point to a cent symbol at the following places:

Line 1: toward the middle of the line

Line 2: at the beginning of the line and at the end of the line

Line 3: toward the middle of the line

Line 4: toward the beginning of the line and toward the end of the line

Line 5: toward the middle of the line and at the end of the line

Line 6: at the end of the line

Line 7: at the end of the line

Excellent reading! Glide your fingers across the next line of braille as I read an example aloud.

25¢ (Read as twenty-five cents)

Notice that the symbol for cent is placed immediately after the number in braille. The cent sign is also placed after the number in print.

Locate the next line of braille, and I will read another example.

10¢ (Read as ten cents)

Move your fingers to the last line of braille on page 1 and read the first expression.

5¢

48¢

Figure 1 shows four 3x3 dot patterns. Pattern (a) has 5 dots: (1,1), (1,2), (2,1), (2,2), (3,1). Pattern (b) has 6 dots: (1,1), (1,2), (2,1), (2,2), (2,3), (3,1). Pattern (c) has 7 dots: (1,1), (1,2), (2,1), (2,2), (2,3), (3,1), (3,2). Pattern (d) has 8 dots: (1,1), (1,2), (1,3), (2,1), (2,2), (2,3), (3,1), (3,2).

You are a Nemeth superstar! The expression would be read as five cents.  
Now read the second expression on the line.

Yes, the expression would be read as forty-eight cents.

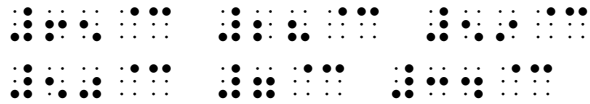
### Fun Fact 4

One side of a coin often has a picture of an important person's head on it. In the United States, a quarter features a picture of George Washington, and the penny includes a picture of Abraham Lincoln.

## Activity 1

## Practice 2.2

Read each of the expressions that include a cent symbol at the top of page 2. There will be 3 expressions on each line.



## Answer 2.2

1¢ 20¢ 92¢

7¢   39¢   64¢

59¢ 85¢ 98¢

68¢ 70¢ 96¢

81¢ 95¢ 72¢

65¢ 28¢ 59¢

50¢ 7¢ 34¢

Below the last line of expressions, there is a Nemeth Code terminator.

[dots 4-5-6, dots 1-5-6]



### Fun Fact 5

The first coins in the United States were pennies. They were produced in the late 1700s and made from copper.

### Section 3: Writing the Cent Sign

## Section 3 Materials

- Braillewriter
- Braille paper
- Optional: G2-M4-Writing-Answers.brf
- Activity 2: same as materials used in the rest of Section 3

## Section 3 Teacher Notes

## Activity 2

- Repeat saying each expression as many times as needed.
- Remind the student to move their fingers across the braille and check their work if needed.



## Section 3 Teacher Script

Honk! Honk! There is a lot of traffic on the highway today. While we are waiting to arrive, let's have fun writing about money on the braillewriter!

### Practice 3.1

Place your fingers on the correct keys on your braillewriter. Then press dot 4, followed by dots 1-4 to write the symbol for cent. Practice writing this symbol several times.

Answer 3.1

⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

The directions are to write the symbol for cent several times, so there may be variation in how many times it is written.

### Practice 3.2

Now let's write an expression that includes a cent symbol.

75¢

Begin by writing a numeric indicator and the number seventy-five. We will finish writing the expression by writing a cent symbol immediately after the number.

What dots are used for a cent symbol?

You are correct. Dot 4, followed by dots 1-4 make the symbol for cent. So press dot 4, followed by dots 1-4 and write a cent symbol.

Check your work as I read aloud what should have been brailled.

Numeric indicator, seven, five, cent symbol with dot 4, followed by dots 1-4.

Answer 3.2

The student can also check their answers for Section 3 using page 1 of the writing answers document.

75¢

⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

Excellent!

### Practice 3.3

Let's write another expression that contains a cent symbol.

83¢

Begin by writing a numeric indicator and the number eighty-three. We will finish writing the expression by writing the symbol for cent immediately after the number.

What dots are used to write the symbol for cent?

You are correct. Dot 4, followed by dots 1-4 make the cent symbol. So press dot 4, followed by dots 1-4 and write a cent symbol.

You got it! Check your work as I read aloud what should have been brailled.

Numeric indicator, eight, three, cent symbol with dot 4, followed by dots 1-4.

### Answer 3.3

83¢

### Practice 3.4

Let's try one more together. The next expression is  $5c$ .

## How should you begin?

Yes, you should begin by writing a numeric indicator and the number five.

## What should I write next?

That is correct! We should place a cent symbol immediately after it.

## What dots make the cent symbol?

Yes, dot 4, followed by dots 1-4 make the cent symbol. You are ready to braille the cent symbol!

Now check your work as I read aloud what should have been brailled.

Numeric indicator, five, cent symbol with dot 4, followed by dots 1-4.

### Answer 3.4

5¢

### Practice 3.5

Now try writing two expressions with a cent symbol by yourself. The first expression is 98¢, and the second expression is 61¢.

Check your work after you finish writing the expressions.

Answer 3.5

98¢ 61¢

Way to go, Nemeth superstar!

## Activity 2

You will need your braillewriter and braille paper for this activity.

### Practice 3.6

Listen and then braille what you hear. After you write each expression, press the line spacing key to move to the next line.

35¢

40¢

91¢

57¢

62¢

67¢

58¢

4¢



## Section 4: Counting Money Involving Coins

### Section 4 Materials

- Coins (two quarters, five dimes, six nickels, four pennies)
- An empty container
- Braillewriter
- Braille paper
- Optional: Counting to 120 Chart available in braille within the curriculum, G2-M4-Writing-Answers.brf
- Activity 3: same as materials used in the rest of Section 4

### Section 4 Teacher Note

When asking the student about the money, their responses may vary. The student will likely emphasize the size of the coins or the ridges around the edge of the coins.

### Section 4 Teacher Script

For the fourth part of the journey, let's put together what we know about coins to complete a new activity. Before we begin the activity, it will be helpful to quickly review skip counting.

First, let's skip count by 10 to 100 together.

10 20 30 40 50 60 70 80 90 100

Now you skip count by 10 by yourself.

10 20 30 40 50 60 70 80 90 100

Excellent! Next, we will skip count by 5 to 100 together.

5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Now you skip count by 5 by yourself.

5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

You did it! Next, we will skip count by 25.

25 50 75 100

Now you skip count by 25 by yourself.

25 50 75 100

Yay! We are ready to begin the counting money activity. You will need coins, a container, your braillewriter, and braille paper.

## Practice 4.1

Here are three coins. [Give the student three dimes without saying what they are.]

Begin by feeling these coins and telling me if they are a quarter, dime, nickel, or penny.

Yes, all of the coins are dimes. How did you know?

How many dimes are there?

You are correct. There are three dimes. What is the value of a dime? If you do not remember, that is okay.

Yes, a dime is worth 10 cents, so let's skip count by 10 to determine how much money we have.

10 20 30

We have 30¢. Now place the coins in the container and use your braillewriter to write 30¢.

### Answer 4.1

The student should write 30¢. The student can also check their answers for Section 4 using the top half of page 2 of the writing answers document.



## Practice 4.2

This time you will explore seven coins. [Give the student 5 dimes and 2 pennies without saying what they are.]

Begin by feeling the coins and telling me if they are a quarter, dime, nickel, or penny.

That's right. You correctly identified the coins as dimes and pennies. Now determine how many pennies and dimes you have.

Yes, two of the coins are pennies, and five of the coins are dimes. What is the value of a dime?

That is correct! The value of a dime is ten cents. So if we have five dimes, how much money do we have? You can skip count if you would like.

10 20 30 40 50

We have fifty cents. What is the value of a penny?

You got it! A penny is worth one cent.

Time to count on! Since we have two pennies, we would add two cents to the fifty cents.

51 52

We have 52¢. Now place the coins in the container and use your braillewriter to write 52¢.

Answer 4.2

52¢



### Practice 4.3

Let's try another one together. Here are four coins.

[two quarters, one dime, and one nickel]

Begin by exploring the coins and telling me if they are a quarter, dime, nickel, or penny.

That's right. There are two quarters, one dime, and one nickel. What are the values of the coins?

That is correct! The quarter is worth twenty-five cents. In addition, the dime is worth ten cents, and the nickel is worth five cents. So how much money do we have?

When counting money, I usually begin with the coins with the largest value. So let's start with the quarters and skip count by 25.

25 50

We have fifty cents so far. Now we will add ten more cents for the dime. That would make sixty cents. If we add five more cents for the nickel, we have sixty-five cents.

Now place the coins in the container and use your braillewriter to write 65¢.

### Answer 4.3

65¢

## Way to go, coin collector!

## Practice 4.4

Time for you to try one by yourself. Here are three coins. [Give the student 1 quarter, 1 nickel, and 1 penny without saying what they are.]

How much money do you have? Talk aloud about what you are doing, and I will help you if needed. Don't forget to write your answer using your braillewriter.

### Answer 4.4

31¢

You did it! You have 31¢.

### Activity 3

You will need your braillewriter and braille paper for the next activity.

## Practice 4.5

I will give you a set of coins. Each time, talk aloud as you determine how much money you have. Then use your braillewriter to write how many cents you have.

You may also use your Counting to 120 chart. After you write each expression, press the line spacing key to move to the next line.

[Give the student each set of the following coins one set at a time without identifying the coins.





## Fun Fact 7

The United States Mint is the government agency that makes up to 10 billion coins each year to use in the United States. That is a lot of coins!

## Section 5: Reading the Dollar Sign

### Section 5 Materials

- One-dollar bill
- Student Braille Document: G2-M4-Student-Materials.brf

### Section 5 Teacher Note

When asking the student to explore the one-dollar bill, hand the student the bill to explore and have a short discussion. Student responses may vary.

### Section 5 Teacher Script

For the fifth part of the journey, let's learn about the dollar bill and how to read and write the dollar sign in Nemeth Code.

Explore a dollar bill and tell me what you notice about the bill.

Yes, the dollar bill is made of paper. It is a special paper made of cotton and linen that will not easily tear. A dollar bill is six inches long and two and a half inches wide. It weighs less than 1 ounce.

We sometimes purchase items with dollar bills. For example, if I wanted to purchase a small toy car, it might cost about one dollar. I could pay with a dollar bill instead of paying with coins.

Let's learn how to read whole numbers with a dollar sign. Begin by locating Section 5 in the middle of page 2 in your braille document. Then softly guide your fingers across the next line of braille. In the middle of the line, you will find the symbol for the dollar sign.

It takes two cells to write the dollar sign. It is written with dot 4 in the first cell, followed by dots 2-3-4 in the second cell. There is a line of dots 2-5 before and after the dollar sign.

⠠⠠⠠⠠ ⠠⠠⠠⠠ ⠠⠠⠠⠠

You can also think of the symbol as dot 4, followed by the letter s. The letter s is used because the print symbol for the dollar includes an “s” with a line drawn through it.

## Practice 5.1

Now it is your turn to find the dollar sign in each line of braille. Move your fingers lightly across the line of braille and say “dollar” when you locate the dollar sign!

[Seven lines of dots 2-5 with one or two dollar signs inserted in each line.]

### Answer 5.1

The student will say “dollar” each time they point to a dollar sign at the following places:

Line 1: at the beginning of the line and at the end of the line

Line 2: toward the middle of the line

Line 3: at the beginning of the line toward the middle of the line and at the end of the line

Line 4: toward the middle of the line and at the end of the line

Line 5: toward the beginning of the line and toward the end of the line

Line 6: at the end of the line

Line 7: at the beginning of the line and toward the middle of the line

Glide your fingers across the next line of braille as I read an example aloud.

\$1

⠠⠠⠠⠠⠠⠠

One dollar

Notice that the dollar sign is placed unspaced before the number in braille. The dollar sign is also placed before the number in print. Locate the next line of braille, and I will read another example.

\$5

⠠⠠⠠⠠⠠⠠

Five dollars

Move your fingers to the last line of braille and read the first expression.

\$2

⠠⠠⠠⠠⠠⠠

\$13

⠠⠠⠠⠠⠠⠠⠠⠠

That is correct! The expression would be read as two dollars. Now read the second expression on the line.

Yes, the expression would be read as thirteen dollars.

## **Practice 5.2**

Beginning at the top of page 3, practice reading monetary expressions with a dollar sign. There will be 3 expressions on each line.

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Answer 5.2

\$16 \$10 \$9

\$70 \$8 \$63

\$17 \$2 \$4

\$6 \$1 \$25

\$3 \$5 \$20

\$30 \$7 \$12

Did you notice that a Nemeth Code terminator followed the last line of expressions?

### **Fun Fact 8**

A different government agency is responsible for making paper money in the United States. It is called the Bureau of Engraving and Printing.

## **Section 6: Writing the Dollar Sign**

### **Section 6 Materials**

- Braillewriter
- Braille paper
- Optional: G2-M4-Writing-Answers.brf
- Activity 4: same as materials used in the rest of Section 6

### **Section 6 Teacher Note**

Activity 4: The student will write monetary expressions with either a dollar sign or a cent sign.

### **Section 6 Teacher Script**

Now let's have fun learning to write expressions that include a dollar sign!

#### **Practice 6.1**

Place your fingers on the correct keys on your braillewriter. Then press dot 4, followed by dots 2-3-4 to write the dollar sign. Practice writing the dollar sign several times.

Answer 6.1

⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

The directions are to write the dollar sign several times, so there may be variation in how many times it is written.

**Practice 6.2**

It is time to write an expression that has a dollar sign.

\$1

Begin by writing a dollar sign. What dots are used for a dollar sign?

You are correct. Dot 4, followed by dots 2-3-4 make the dollar sign. So press dot 4, followed by dots 2-3-4 and write a dollar sign.

Finish by writing the digit 1 immediately after the dollar sign.

Check your work as I read aloud what should have been brailled.

Dollar sign with dot 4, followed by dots 2-3-4, and then the digit 1

Answer 6.2

The student can also check their answers for Section 6 using the bottom half of page 2 of the writing answers document.

\$1

⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

Excellent!

**Practice 6.3**

Let's write another expression that contains a dollar sign.

\$8

How would you braille this?

You are correct. To braille \$8, begin with dot 4, followed by dots 2-3-4. Then braille the digit 8.

Answer 6.3

\$8

⠠⠠⠠⠠⠠⠠

Now check your work. Did you braille it correctly?

Way to go, Nemeth superstar!

### Fun Fact 9

George Washington is featured on the front side of the dollar bill.

### Activity 4

You will need your braillewriter and braille paper for this next activity.

### Practice 6.4

Listen as I read a series of expressions. Some of them will include a dollar sign, and some will not. Then write the expressions in braille. Space one time between the expressions.

\$3 \$50 \$21

Now move your fingers across the braille and check your work as I say the expressions again.

\$3 \$50 \$21

Answer 6.4

\$3 \$50 \$21

⠠⠠⠠⠠⠠⠠ ⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠ ⠠⠠⠠⠠⠠⠠

### Practice 6.5

Press your line spacing key twice to move to the next line.

\$10 38¢ \$9

Now move your fingers across the braille and check your work as I say the expressions again.

\$10 38¢ \$9

### Answer 6.5

\$10   38¢   \$9

## Practice 6.6

Press your line spacing key twice to move to the next line.

\$6 72¢ 45¢

Now move your fingers across the braille and check your work as I say the expressions again.

\$6 72¢ 45¢

### Answer 6.6

\$6 72¢ 45¢

## Fun Fact 10

Abraham Lincoln is featured on the front side of the \$5 bill.

## Section 7: Counting Money Involving Bills and Coins

## Section 7 Materials

- Money (three one-dollar bills, two quarters, three dimes, three nickels, four pennies)
- Five-compartment sorting tray (Alternative: dozen muffin tin)
- Small container

## Section 7 Teacher Note

If using a muffin tin, have the student store the coins on the top row, move what coins are needed for each problem to the middle row, and then move the coins to the bottom row as they find the total.



## Section 7 Teacher Script

For the seventh part of the journey, let's learn more about how to count money. We will need several dollar bills, coins, a sorting tray, and a small container.

Begin by exploring the money. [Give the student two dollar bills, three dimes, and one nickel without saying what they are.]

Tell me if the coins are a quarter, dime, nickel, or penny.

That's right. You correctly identified the coins as dimes and a nickel. How many bills, dimes, and nickels do we have?

Yes, there are two dollar bills, three dimes, and one nickel. What are the values of the coins?

That is correct! The dimes are worth ten cents each, and the nickel is worth five cents.

Next let's use a sorting tray to organize the money by its worth, starting with the item with the largest value on the left and ending with the item with the smallest value on the right. I will help if needed.

So how much money do we have?

First, we have two dollars since we have two dollar bills.

We also have three dimes so let's skip count by 10.

10 20 30

We have two dollars and thirty cents so far. If we add five more cents for the nickel, we have a total of two dollars and thirty-five cents.

Now put the coins and bills in the container. Then we can try another one together.

Begin by exploring this amount of money. [three dollar bills, one quarter, one dime, and one penny]

Tell me if the coins are a quarter, dime, nickel, or penny.

That's right. You correctly identified the coins as a quarter, a dime, and a penny. What are the values of the coins?

That is correct! The quarter is worth twenty-five cents, and the dime is worth ten cents. The penny is worth one cent.

How many dollars do we have?

Yes, there are three dollar bills.

Next let's use a sorting tray to organize the money by its worth, starting with the item with the largest value on the left and ending with the item with the smallest value on the right. I will help if needed.

So how much money do we have?

First, we have three dollars since we have three dollar bills.

We also have a quarter, so if we add twenty-five cents to three dollars, we have three dollars and twenty-five cents.

We also have a dime, so we should add ten more cents. Thus, we have three dollars and thirty-five cents.

If we add one more cent for the penny, we have a total of three dollars and thirty-six cents.

Place the money back into the container. Now it is your turn to try one by yourself. Do you have any questions?

Here is another amount of money. [Give the student one dollar bill, three nickels, and four pennies without saying what they are.]

How much money do you have? Talk aloud about what you are doing, and I will help you if needed.

Great work, money superstar! You have one dollar and nineteen cents.

Place the money back into the container.

Here is new amount of money. [two dollar bills, two quarters, two dimes, three nickels, and two pennies]

How much money do you have? Once again, talk aloud about what you are doing, and I will help you if needed.

You did it! You have two dollars and eighty-seven cents.

Place the money back into the container.

## Fun Fact 11

Older worn dollar bills are replaced with new dollar bills by the Bureau of Engraving and Printing in the United States.

## Section 8: Reading Money with Dollars and Cents

## Section 8 Materials

Student Braille Document: G2-M4-Student-Materials.brf

## Section 8 Teacher Script

For the eighth part of the journey, let's learn how to read and write about money that includes a dollar sign and a decimal point.

A decimal point is used when reading and writing about money that includes both dollars and cents.

Begin by locating Section 8 in the middle of page 3 in your braille document. Then softly guide your fingers across the next line of braille. In the middle of the line, you will find the symbol for the decimal point. It is written with dots 4-6. There is a line of dots 2-5 before and after the decimal point.

## Practice 8.1

Now it is your turn to find the decimal point in each line of braille. Move your fingers lightly across the line of braille and say "decimal point" when you locate the symbol!

[Six lines of dots 2-5 with one or two decimal points inserted in each line.]

### Answer 8.1



The student will say “decimal point” each time they point to a decimal point at the following places:

Line 1: at the beginning of the line

Line 2: toward the middle of the line

Line 3: at the beginning of the line and at the end of the line

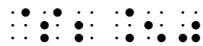
Line 4: toward the middle of the line and at the end of the line

Line 5: toward the beginning of the line and toward the end of the line

Line 6: at the end of the line

Glide your fingers across the next line of braille as I read an example aloud.

\$2.50

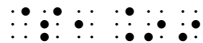


Two dollars and fifty cents

Notice that the expression began with a dollar sign and the decimal point is read as "and".

Follow along in braille as I read another example.

\$1.99



One dollar and ninety-nine cents

Move your fingers to the last line of braille and read the first expression.

\$3.25

\$11.46



That is correct! The expression would be read as three dollars and twenty-five cents. Now read the second expression on the line.

Yes, the second expression would be read as eleven dollars and forty-six cents.

## Fun Fact 12

Paper money is durable. It usually takes more than 4,000 folds before a bill tears.

Next, we will practice reading monetary expressions containing a dollar sign and a decimal point.

## Practice 8.2

Locate the top line of braille on page 4 and read just the expressions.

[Seven lines of dots 2-5 with one or two monetary expressions inserted in each line.]

The image displays a 5x10 grid of 50 small dot patterns, each representing a different number from 0 to 49. The patterns are arranged in five rows of ten. Each pattern consists of black dots on a white background, forming unique shapes for each number. The patterns are as follows:

- Row 1: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
- Row 2: 10, 11, 12, 13, 14, 15, 16, 17, 18, 19
- Row 3: 20, 21, 22, 23, 24, 25, 26, 27, 28, 29
- Row 4: 30, 31, 32, 33, 34, 35, 36, 37, 38, 39
- Row 5: 40, 41, 42, 43, 44, 45, 46, 47, 48, 49

### Answer 8.2

Line 1: \$2.85 \$3.02

Line 2: \$3.70   \$1.25   \$1.32

Line 3: \$4.81    \$2.75

Line 4: \$9.26

Line 5: \$2.19

Line 6: \$4.97 \$3.82

Line 7: \$2.04 \$1.95

### Practice 8.3

I will say an expression. Then you will read the line of braille and find its match, beginning in the middle of page 4. Say "found it" when you find the match!

[Make sure the student is viewing the five lines of braille in the middle of page 4.]

\$3.75

\$9.46

\$2.52

\$1.95

\$3.08

### Answer 8.3

(third item on answer choices)

 (last item on answer choices)

 (second item on answer choices)

 (first item on answer choices)

 (last item on answer choices)

Excellent matching!

## Practice 8.4

Let's try a few more! Remember to say "found it" when you find the match!

[Make sure the student is viewing the five lines of braille toward the bottom of page 4.]

\$2.00

\$7.80

99¢

\$1.00

\$2.75

### Answer 8.4

(third item on answer choices)

(second item on answer choices)

 (last item on answer choices)

(second item on answer choices)

(first item on answer choices)

Monetary expressions of less than one dollar can also be written with a decimal point and dollar sign instead of with a cent sign.

Move to the next line of braille for an example.

\$0.75

Seventy-five cents with a dollar sign

Move your fingers to the next line of braille and read the first expression.

\$0.89

\$0.67

That is correct! The expression would be read as eighty-nine cents with a dollar sign. Now read the second expression on the line.

Yes, the second expression would be read as sixty-seven cents with a dollar sign.

On the last line of braille, there is a symbol that tells us that we are finishing math content. What is it called?

[dots 4-5-6, dots 1-5-6]

Yes, the two-cell symbol is called a Nemeth Code terminator.

### Fun Fact 13

Green ink is used when printing dollar bills.

## Section 9: Writing Money with Dollars and Cents

## Section 9 Materials

- Braillewriter
- Braille paper
- Optional: G2-M4-Writing-Answers.brf
- Activity 5: in addition to the materials used in the rest of Section 9,
  - Coins (four one-dollar bills, three quarters, three dimes, seven nickels, four pennies)
  - Five-compartment sorting tray
  - Small container



## Section 9 Teacher Note

Activity 5: The student will write monetary expressions that include both dollars and cents and practice numbering their answers.

## Section 9 Teacher Script

Now let's have fun learning to write monetary expressions that include both dollars and cents!

First, we need to learn how to write a decimal point in Nemeth Code.

### Practice 9.1

Place your fingers on the correct keys on your braillewriter. Then press dots 4-6 to write the decimal point. Practice writing the decimal point several times.

Answer 9.1

⠠⠠⠠⠠⠠

The directions are to write the decimal point several times, so there may be variation in how many times it is written.

### Practice 9.2

Now let's write a monetary expression that includes a dollar sign and a decimal point.

\$1.25

Begin by writing a dollar sign. What dots are used for a dollar sign?

You are correct. Dot 4, followed by dots 2-3-4 make the dollar sign. So press dot 4, followed by dots 2-3-4 and write a dollar sign.

Then write the digit 1 immediately after the dollar sign since we have one dollar. The decimal point comes next. What dots are used for a decimal point?

You got it! Dots 4-6 make the decimal point. So press dots 4-6 to write a decimal point. Next we will write the number twenty-five.

Check your work as I read aloud what should have been brailled.

Dollar sign with dot 4, followed by dots 2-3-4, one, decimal point with dots 4-6, two, five

### Answer 9.2

The student can also check their answers for Section 9 using page 3 of the writing answers document.

\$1.25

Excellent!

### Practice 9.3

Let's write another monetary expression with a dollar sign.

\$3.99

How would you braille this?

You are correct. To braille \$3.99, begin with dot 4, followed by dots 2-3-4. Then braille the digit 3. What would you braille next?

Yes, the decimal point would be brailled next. It would be followed by the number ninety-nine.

Now check your work. Did you braille it correctly?

Dollar sign with dot 4, followed by dots 2-3-4, three, decimal point with dots 4-6, nine, nine

### Answer 9.3

\$3.99

## Practice 9.4

Let's try two more together.

\$2.49

How would you braille this?

You are correct. To braille \$2.49, begin with dot 4, followed by dots 2-3-4. Then braille the digit 2. What would you braille next?

Yes, the decimal point would be brailled next. It would be followed by the number forty-nine.

Now check your work. Did you braille it correctly?

Dollar sign with dot 4, followed by dots 2-3-4, two, decimal point with dots 4-6, four, nine

### Answer 9.4

\$2.49

You got it!

### Practice 9.5

Now braille \$5.00.

How would you braille this?

You are correct. To braille \$5.00, begin with dot 4, followed by dots 2-3-4. Then braille the digit 5. What would you braille next?

Yes, the decimal point would be brailled next. It would be followed by two zeros.

Now check your work. Did you braille it correctly?

Dollar sign with dot 4, followed by dots 2-3-4, five, decimal point with dots 4-6, zero, zero

Answer 9.5

\$5.00

### Fun Fact 14

Although it is not known why the color green was originally selected by the Bureau of Engraving and Printing, the color green continues to be used because green is thought to be symbolic of a strong government with stable credit.

## Activity 5

You will need your braillewriter and braille paper for the next activity.

## Practice 9.6

I will give you a set of dollars and coins. Each time, talk aloud as you determine how much money you have. Then write your answer.

Don't forget to number your problems and use a separate line for each answer.

[Give the student each set of the following coins one set at a time without saying what they are.

1. 2 dollars and 1 quarter
2. 1 dollar, 7 nickels and 2 pennies
3. 1 dollar, 3 dimes, 2 nickels, and 3 pennies
4. 3 dollars, 1 dime, 3 nickels, and 4 pennies
5. 2 dollars, 2 quarters, and 2 pennies
6. 4 dollars, 5 nickels and 3 pennies
7. 3 dollars, 3 quarters, 1 dime, 1 nickel, and 1 penny]

### Answer 9.6

The student should write:

1. \$2.25

2. \$1.37

Figure 1 shows a 3x3 grid of 3x3 dot patterns. Each pattern is a 3x3 grid of dots, some of which are filled (black) and some are empty (white). The patterns represent different combinations of the three rows and columns of the 3x3 grid.

3. \$1.43

4. \$3.29

Figure 1 shows four 3x3 dot patterns. Pattern (a) has 6 dots: (1,1), (1,2), (2,1), (2,2), (2,3), (3,1). Pattern (b) has 7 dots: (1,1), (1,2), (2,1), (2,2), (2,3), (3,1), (3,2). Pattern (c) has 8 dots: (1,1), (1,2), (2,1), (2,2), (2,3), (3,1), (3,2), (3,3). Pattern (d) has 9 dots: (1,1), (1,2), (2,1), (2,2), (2,3), (3,1), (3,2), (3,3), (3,4).

5. \$2.52

6. \$4.28

Figure 1 shows a 3x3 grid of 3x3 dot patterns. Each pattern is a 3x3 grid of dots, some of which are filled (black) and some are empty (white). The patterns represent different states of a 3x3 grid.

7. \$3.91

### Fun Fact 15

The \$10 bill will be redesigned in 2026, followed by the \$50 bill in approximately 2028.

## Section 10: Math Word Problems

## Section 10 Materials

Student Braille Document: G2-M4-Student-Materials.brf

## Section 10 Teacher Notes

- Assist the student or provide helping hints as necessary when solving each of these problems.
- For Problem 1, student responses may vary. You may want to point out that the problem begins in cell 1 with run-over lines beginning in cell 3. You may also want to share that the problem number is brailled using literary Unified English Braille numbers.

## Section 10 Teacher Script

We have almost reached our destination! While we continue traveling toward our destination, let's learn how to read and solve math word problems, including those about money.

Let's read four example word problems, beginning at the top of page 5 in your braille document. You will notice that Nemeth Code is opened immediately before the math expression  $48+13$ .

Please tell me if you need any help when reading the problem.

1. Show how you can use the Counting to 120 Chart to determine the sum of  $48+13$ .

Did you notice that Nemeth Code was closed immediately after the math expression  $48+13$ ? In addition, the period was placed after the Nemeth Code terminator.

What else, if anything, did you notice?

Now focus on answering the problem. Tell me step-by-step how you can solve the problem.

Yes, forty-eight plus thirteen equals sixty-one.

Read the first sentence of the next multiple choice problem.

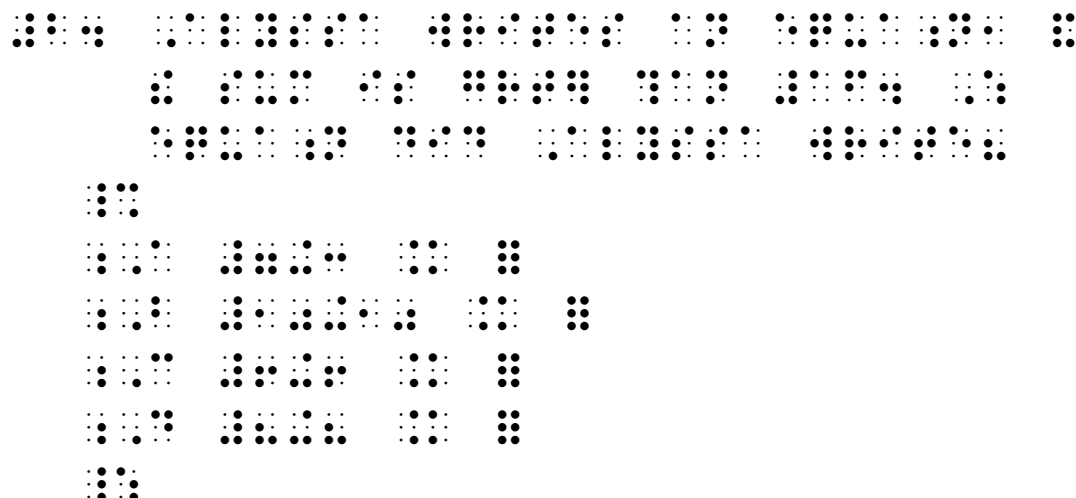
2. Alyssa writes an equation, and the sum is greater than 16. Which equation did Alyssa write?

A  $7+3 = ?$

B  $10+10 = ?$

C  $6+6 = ?$

D  $8+8 = ?$



The number 16 is written using a literary Unified English Braille number because 16 is a whole number. That means 16 does not have a decimal point, dollar sign, or cent sign. Thus, there is not a need to open Nemeth Code. Continue reading the rest of the problem.

Did you notice the opening Nemeth Code indicator above the first answer choice?

Where was the Nemeth Code terminator placed?

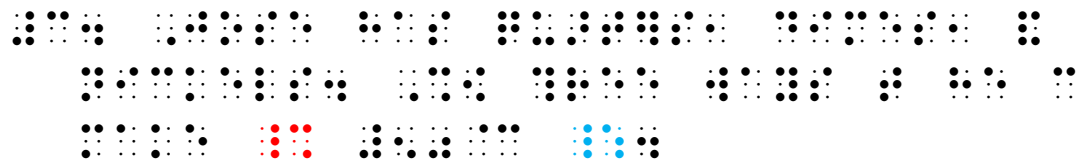
Yes, it was placed on the line below the last multiple answer choice. That means all of the answer choices are in Nemeth Code.

Now focus on answering the problem. Tell me step-by-step how you can solve the problem.

Yes, B is the correct answer. Ten plus ten equals twenty, and twenty is greater than sixteen.

Read the next word problem.

3. Jose has quarters, dimes, and nickels. Show three ways that he can make 50¢.



Point to the opening Nemeth Code indicator in the problem.

[dots 4-5-6, dots 1-4-6]



Yes, there is one opening Nemeth Code indicator in the problem. It is in the middle of the third line of the problem.

Excellent! Now show me the Nemeth Code terminator.

[dots 4-5-6, dots 1-5-6]



You got it! There is one Nemeth Code terminator in the problem. It is toward the end of the last line of the problem.

Monetary expressions like 50¢ that include a cent sign are brailled in Nemeth Code.

Now focus on answering the problem. You will need several quarters, dimes, and nickels. Tell me step-by-step how you can solve the problem.

Yes, there are multiple correct answers such as five dimes make 50¢ or ten nickels make 50¢.

We are ready for you to read the fourth word problem.

4. Shaquilla has \$13.00 in cash. If she would like to buy a new backpack that costs \$20.00, how much does she need to save?

Point to the opening Nemeth Code indicators in the problem.

[dots 4-5-6, dots 1-4-6]





Yes, there are two opening Nemeth Code indicators in the problem. The first indicator is in the middle of the first line of the problem, and the second indicator is in the middle of the third line of the problem.

Excellent! Now show me the Nemeth Code terminators.

[dots 4-5-6, dots 1-5-6]



You got it! There are two Nemeth Code terminators in the problem. The first Nemeth Code terminator is the last symbol on the first line of the problem, and the second one is toward the end of the third line of the problem.

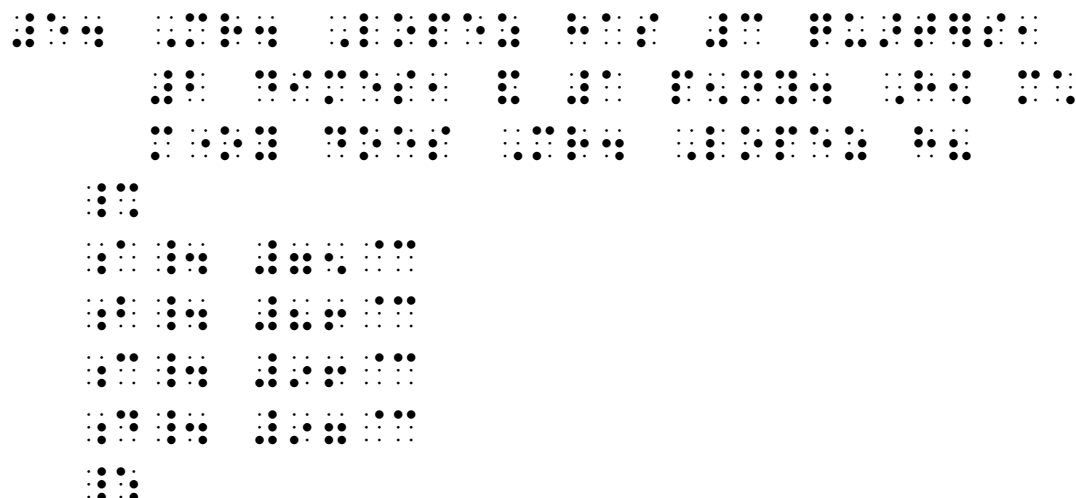
Expressions that include a dollar sign and decimal point are brailled in Nemeth Code. Since the word problem included two expressions with a dollar sign and decimal point, we needed to open and close Nemeth Code twice within the problem.

Now focus on answering the problem. Tell me step-by-step how you can solve the problem.

That's correct. Shaquilla would need to save \$7.00 in order to buy a new backpack.

Turn to page 6 and read one more problem.

5. Mr. Lopez has 3 quarters, 2 dimes, and 1 penny. How much money does Mr. Lopez have?
- a. 75¢
  - b. 86¢
  - c. 96¢
  - d. 97¢



Similar to the second problem, we did not need to open Nemeth Code for the whole numbers 1, 2, and 3. However, Nemeth Code was opened before the first answer choice since all of the answer choices included a cent sign. Once again, Nemeth Code was closed on the line below the last answer choice.

Now focus on answering the problem. Tell me step-by-step how you can solve the problem.

Yes, C is the correct answer. Three quarters, two dimes, and one penny equals 96¢.

## Section 11: Review

## Section 11 Materials

## Activity 6

- Connect Four game cards available in both print and braille within the curriculum
- Flashcards with monetary expressions available in both print and braille within the curriculum
- Two-compartment sorting tray (Alternative: two small storage boxes)
- Markers such as small stickers or pieces of Wikki Stix® (Alternative: pushpins on a cork board or magnets on a cookie sheet)

## Section 11 Teacher Notes

### Activity 6

- There are additional directions for this activity in the Teacher Guide.
- The game cards are 40 cells wide and will require 11.5 x 11 inch paper, but the flashcards don't require the wide paper.
- You will need 2 or more players for this game.
- If you use Wikki Stix<sup>®</sup> pieces, roll them into a ball with your hand so that they will stick to the paper more easily.
- If needed, explain how you win Connect Four by having four in a row down, across, or diagonally. There are four possible ways to win diagonally instead of just the traditional two ways since the game board is not a square.
- This activity can easily be completed with several students who read print or braille. If some of the players read print, add print to each of the flashcards. If preferred, you can tape or glue each print flashcard to its respective braille flashcard.

## Section 11 Teacher Script

Yay! We did it! We have reached our destination. Let's finish our adventure with an activity.

### Activity 6

We are going to play a game called Connect Four. We will need Connect Four game cards, flashcards with monetary expressions, a two-compartment sorting tray, and markers. Small stickers or pieces of Wikki Stix<sup>®</sup> can be used for markers.

Before we begin the activity, each player needs to select a game card.

Use your hands to explore the game card. There are four columns below the title, and each column is made up of five squares.

Then as each monetary expression is read, quickly scan your game card and place a marker on the monetary expression that was called. We will play until a winner calls out Connect Four.

Now shuffle the monetary expression cards. You will take turns drawing one card and reading the expression on it. As you read each card, use a two-compartment sorting tray to separate which cards you have read and which cards you have not read.

Congratulations! You are a Nemeth champion!