

Pre-Kindergarten Module 3

Numerals 4 and 5

Teacher Script Answer Key

Introduction

- All bracketed text should not be read aloud and is for reference only.
- The questions are not numbered in the student document. However, the questions and answers have been numbered in this document to aid teachers and parents.
- 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: Reading Numeral 4

Section 1 Materials

- Two swing cells (or two muffin tins and balls if you don't have access to swing cells)
- Student Braille Document: GPK-M3-Student-Materials.brf
- Activity 1
 - Timer
 - Five flashcards for each numeral from 1-4 shuffled

Section 1 Teacher Note

If you are using hard copy braille, the student can do the following instead of making sounds whenever they find a numeral 4:

- Stomp a foot
- Underline or circle the numeral 4 with a grease marker or crayon
- Place a small sticker on top of each numeral 4

Section 1 Teacher Script

All board the Nemeth train to learn about the numeral 4!

Just like the numerals 1-3 that you have learned, 4 begins with the numeric indicator in the first braille cell! It ends with dots 2-5-6 in the second braille cell.

[Make sure the student is viewing the numeral 4 at the top of page 1.]

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Let's use the swing cells to build the numeral 4. Tell me the dots that make a numeric indicator. That's right! Dots 3-4-5-6 make the numeric indicator! Way to go, train conductor!

Begin by using the pegs to make the numeric indicator in the first braille cell. Then move to the second braille cell and place pegs in dots 2-5-6.

Practice 1.1

Now it is your turn to find the numeral 4 in each line. Move your fingers across each line of braille and say "all aboard" like a train conductor whenever you find the numeral 4! Remember to use a light touch and keep your fingers curved.

[Six lines of dots 2-5 on page 1 with a numeral 4 inserted in each line.]

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Answer 1.1

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The student will say "all aboard" each time they point to a numeral 4 at the following places:

Line 1: toward the middle of the line

Line 2: at the end of the line

Line 3: at the beginning of the line

Line 4: slightly before the middle of the line

Line 5: at the end of the line

Line 6: slightly after the middle of the line

Good job, train conductor! You found the numeral 4 in each line.

Practice 1.2

Now find the numeral 4 hidden in a line of railroad cars, which are really full braille cells.

[Six lines of full braille cells on page 2 with a numeral 4 inserted in each line.]

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Answer 1.2

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The student should point to a numeral 4 at the following places:

Line 1: third item in the line

Line 2: first item in the line

Line 3: seventh (next to the last) item in the line

Line 4: second item in the line

Line 5: sixth (next to the last) item in the line

Line 6: last item in the line

Practice 1.3

Sometimes a line of braille may have more than one numeral 4. Move your fingers lightly across the next two lines of braille and find the numeral 4s.

[Make sure the student is viewing the first two lines of braille on page 3.]

Figure 1 displays ten dot patterns arranged in two rows of five. The top row shows patterns for 1, 2, 3, 4, and 5 dots. The bottom row shows patterns for 6, 7, 8, 9, and 10 dots. Each pattern is a unique arrangement of dots on a 3x3 grid.

Answer 1.3

The student should point to a numeral 4 at the following places:

Line 1: at the beginning of the line and in the middle of the line

Line 2: in the middle of the line and at the end of the line

Fun Fact 1

Some trains travel slightly above the track on powered magnets.

Way to go, train conductor!

Practice 1.4

Continue to the next six lines of braille on the page and find the numeral 4s.
Say "tickets please" when you find the numeral 4.

[illegible]

Answer 1.4

The student will say "tickets please" each time they point to a numeral 4 at the following places:

Line 1: toward the middle of the line and at the end of the line

Line 2: slightly after the middle of the line and at the end of the line

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

Line 4: slightly before the middle of the line and toward the end of the line

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

Line 6: toward the middle of the line and at the end of the line

Practice 1.5

Chug-chug-chug-chug! Let's move our fingers lightly over the braille and find the numeral 4s that are hiding in the line of magnet railroad cars, which are really full braille cells.

[Six lines of full braille cells on page 4 with two numeral 4s inserted in each line.]

The sequence consists of eight 3x3 dot patterns. The first seven patterns are variations of a 3x3 grid with some dots missing, and the eighth pattern is a 3x3 grid with all dots present.



Answer 1.5



The student should point to a numeral 4 at the following places:

Line 1: fourth and last items in the line

Line 2: second and last items in the line

Line 3: first and fourth items in the line

Line 4: sixth and last items in the line

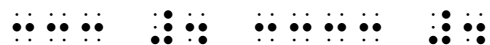
Line 5: first and last items in the line

Line 6: third and sixth items in the line

Practice 1.6

Let's find the numeral 4 again! This time say "wwwwooo" like the train whistle when you find the numeral 4! On some lines you find only 1 numeral 4 and on other lines you may find lots of numeral 4s.

[Seven lines of dots 2-5 on page 5 with one or more numeral 4s inserted in each line.]



Answer 1.6



The student will say “wwwwooo” each time they point to a numeral 4 at the following places:

Line 1: toward the middle of the line and at the end of the line

Line 2: at the beginning of the line, in the middle of the line, and at the end of the line

Line 3: toward the end of the line

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

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

Line 6: slightly before the middle of the line and toward the end of the line

Line 7: at the beginning of the line

Fun Fact 2

The world’s fastest train today is in China.

Practice 1.7

Sometimes a line will have more than one numeral. Find the numeral 4 in each line. Say “next stop” like a conductor when you find the numeral 4 in each line. Be careful to make sure it is a numeral 4 and not 1, 2, or 3.

[Six lines of dots 2-5 on page 6 with one or more numerals inserted in each line.]

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4 4

Answer 1.7

The student will say “next stop” each time they point to a numeral 4 at the following places:

Line 1: at the end of the line

Line 2: toward the middle of the line

Line 3: at the end of the line

Line 4: at the end of the line

Line 5: at the beginning of the line

Line 6: slightly after the middle of the line

Super job! Did you know that magnet trains do not have wheels?

Practice 1.8

Move your fingers lightly over the braille lines and find some more numeral 4s that are hiding in a line of magnet railroad cars and other numerals.

[Six lines of full braille cells on page 7 with one or more numerals inserted in each line.]

Answer 1.8

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The student should point to a numeral 4 at the following places:

Line 1: fourth item in the line

Line 2: first and last items in the line

Line 3: third item in the line

Line 4: last item in the line

Line 5: fourth item in the line

Line 6: last item in the line

That was great reading, train conductor!

Practice 1.9

Next, read the numeral at the beginning of each line and find its match on the line of braille. Make a sound like a train when you find the match! Chug-chug-chug!

[Make sure the student is viewing the six lines of braille on page 8.]

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Answer 1.9

The student will read the numeral at the beginning of each line, find its match, and make a sound like a train when they find the match.

Line 1: 4 (third item on answer choices)

Line 2: 1 (fifth item on answer choices)

Line 3: 2 (fourth item on answer choices)

Line 4: 4 (last item on answer choices)

Line 5: 3 (first item on answer choices)

Line 6: 4 (last item on answer choices)

Activity 1

Use your flashcards to practice reading the numerals 1-4. Once you can read all of the numerals correctly, go back and time how quickly you can read the numerals! Do you think you can read the numerals even quicker? If so, try one more time!

Section 2: Writing Numeral 4

Section 2 Materials

- Braillewriter
- Braille paper
- Two swing cells (or two muffin tins and balls if you don't have access to swing cells)
- Activity 2: in addition to the other materials used in Section 2,
 - Four objects that remind the student of a train and can be glued or stuck onto the paper
 - Glue stick (Alternatives: double-sided tape, sticky tack, glue)

Section 2 Teacher Script

Time for writing! Let's go back to the swing cells. First, use the pegs and make a numeric indicator again. Which dots make the numeric indicator? That's right! Dots 3-4-5-6 make the numeric indicator. Afterwards, open the swing cell. This will help you know where your fingers will go when you are writing!

Practice 2.1

Use your ring finger on the left and all three fingers on the right to write the numeric indicator on your braillewriter.

Answer 2.1



The student should have written a numeric indicator.

Now let's finish the numeral 4. With your second swing cell, place the pegs in dots 2-5-6. Now open the swing cell.

Practice 2.2

Use the middle finger on your left hand as well as the middle and ring fingers on your right hand. You try it now in the air and then on your braillewriter.

Answer 2.2



The student should have written dots 2-5-6.

Practice 2.3

Let's put the two cells together and practice writing the numeral 4 in Nemeth using your braillewriter. Space one time between your numerals.

When you finish writing your numerals several times, move your fingers across the braille and check your work!

Answer 2.3



The directions are to write the numeral 4 several times, so there may be variation in how many times the numeral 4 is written. Any length of line is considered correct.

Activity 2

You will need a sheet of braille paper, your braillewriter, and four objects that remind you of a train!

Write the numeral 4 in Nemeth. Then, glue your four trains onto the paper!

That was great counting and writing, train conductor.

Section 3: Reading Numeral 5

Section 3 Materials

- Two swing cells (or two muffin tins and balls if you don't have access to swing cells)
- Student Braille Document: GPK-M3-Student-Materials.brf
- Activity 3
 - Sorting tray with dividers
 - Five flashcards for each numeral from 1-4 shuffled
- Activity 4
 - Timer
 - Five flashcards for each numeral from 1-5 shuffled

Section 3 Teacher Script

Practice 3.1

Let's practice reading the numerals 1 to 4 before learning the numeral 5.

[Make sure the student is viewing the two lines of braille on page 9.]

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Answer 3.1

4 1 3 4

2 3 4 1

Activity 3

Use your flashcards and find all of the numeral 4s. Place all of the 4s in one stack and all of the other numerals in a different stack.

Let's explore the numeral 5 in Nemeth!

[Make sure the student is viewing the numeral 5 at the top of page 10.]

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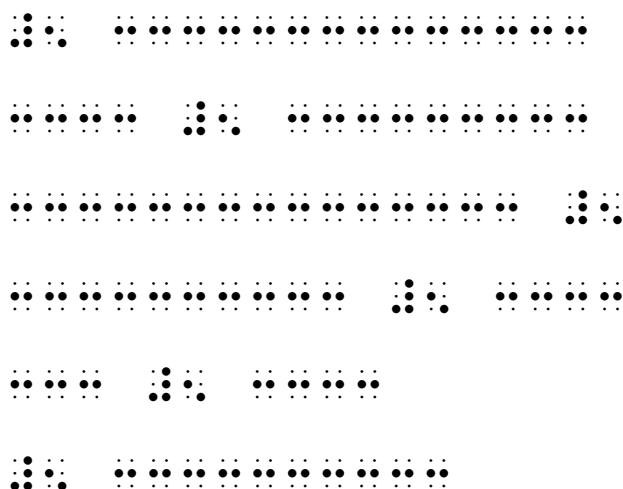
Numeral 5 begins with the numeric indicator in the first braille cell and ends with dots 2-6 in the second braille cell! Now let's use the swing cell. It is your turn to build the numeral 5 with a swing cell. Do you remember the dots that make a numeric indicator? That's right! Dots 3-4-5-6 make a numeric indicator!

Begin by using the pegs to make the numeric indicator in the first swing cell. Then move to the second swing cell and place pegs in dots 2-6. Congratulations! You made the numeral 5.

Practice 3.2

Now it is your turn to find the numeral 5 in each line of braille. Move your fingers lightly across the line of braille and make your favorite train sound when you find the numeral 5!

[Six lines of dots 2-5 on page 10 with a numeral 5 inserted in each line.]



Answer 3.2



The student will make their favorite train sound each time they point to a numeral 5 at the following places:

Line 1: at the beginning of the line

Line 2: toward the middle of the line

Line 3: at the end of the line

Line 4: slightly after the middle of the line

Line 5: toward the middle of the line

Line 6: at the beginning of the line

Whooooosh along the rails! You found the numeral 5.

Practice 3.3

Now move your fingers across each line of braille and find the numeral 5 hidden in a line of railroad cars, which are really full braille cells.

[Six lines of full braille cells on page 11 with a numeral 5 inserted in each line.]

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Answer 3.3

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The student should point to a numeral 5 at the following places:

Line 1: third item in the line

Line 2: first item in the line

Line 3: fourth item in the line

Line 4: second item in the line

Line 5: fifth item in the line

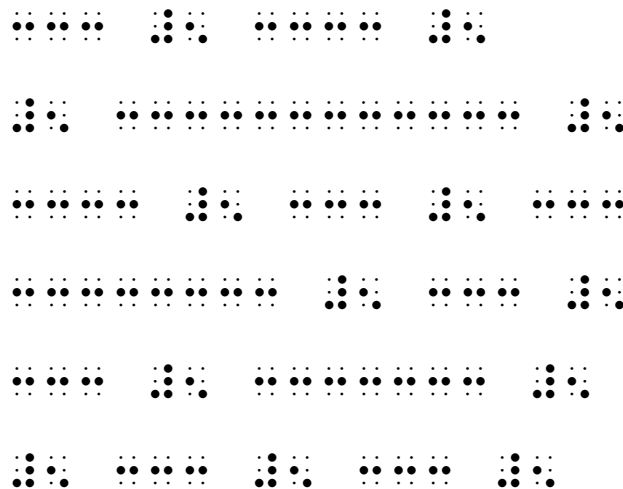
Line 6: third item in the line

Tell me what the numeral 5 feels like to you. Then tell me what you like about trains.

Practice 3.4

Now there will be more than one numeral 5 on each line of braille. Move your fingers across the line of braille and make a sound like a train whistle when you find each numeral 5!

[Six lines of dots 2-5 on page 12 with two or three numeral 5s inserted in each line.]



Answer 3.4



The student will make a train whistle sound each time they point to a numeral 5 at the following places:

Line 1: toward the middle of the line and at the end of the line

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

Line 3: slightly before the middle of the line and slightly after the middle of the line

Line 4: slightly after the middle of the line and at the end of the line

Line 5: slightly before the middle of the line and at the end of the line

Line 6: at the beginning of the line, in the middle of the line and at the end of the line

Practice 3.5

Let's keep going! Now move your fingers like a train on train tracks across the line of braille and find all of the numeral 5s. They are hidden in a line of railroad cars, which are really full braille cells. Make a sound like a train each time you find the numeral 5!

[Six lines of full braille cells on page 13 with two numeral 5s inserted in each line.]

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Answer 3.5

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The student will make a train sound each time they point to a numeral 5 at the following places:

Line 1: third and last items in the line

Line 2: fifth and last items in the line

Line 3: first and fourth items in the line

Line 4: sixth and last items in the line

Line 5: first and third items in the line

Line 6: second and last items in the line

Way to go, math superstar!

Practice 3.7

Let's find some more numeral 5s that are hiding in a line of railroad cars and numerals 1, 2, 3, and 4. Remember to find only the numeral 5s.

[Six lines of full braille cells on page 15 with one or more numerals inserted in each line.]

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Answer 3.7

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The student should point to a numeral 5 at the following places:

Line 1: third item in the line

Line 2: second item in the line

Line 3: last item in the line

Line 4: fifth item in the line

Line 5: sixth (next to the last) item in the line

Line 6: third item in the line

Fun Fact 4

Some trains can pull more than 4,000 tons of freight at a time!

Practice 3.8

Now let's practice reading numerals 1, 2, 3, 4, and 5.

[Make sure the student is viewing the two lines of braille on page 16.]

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Answer 3.8

1 5 4 3

4 2 5 1

Activity 4

Use your flashcards to practice reading the numerals 1-5. Once you can read all of the numerals correctly, go back and time how quickly you can read the numerals! Do you think you can read the numerals even quicker? If so, try one more time! Good luck, train conductor!

Section 4: Writing Numeral 5

Section 4 Materials

- Braillewriter
- Braille paper
- Two swing cells (or two muffin tins and balls if you don't have access to swing cells)
- Activity 5: in addition to the other materials used in Section 4,
 - Five objects that remind the student of a train and can be glued or stuck onto the paper
 - Glue stick (Alternatives: double-sided tape, sticky tack, glue)

Section 4 Teacher Script

Time for writing! Let's go back to the swing cell and use the pegs to make a numeric indicator. Which dots make the numeric indicator? That's right! Dots 3-4-5-6 make the numeric indicator. Since the swing cell is closed, open the swing cell. This will help you know where your fingers will go!

Practice 4.1

Use your ring finger on the left and all three fingers on the right to write the numeric indicator on your braillewriter.

Answer 4.1



The student should have written a numeric indicator.

Practice 4.2

Now let's finish the numeral 5. On the second swing cell, place the pegs in dots 2-6. Use your middle finger on your left hand and your ring finger on your right hand. Since the swing cell is closed, open the swing cell. This will help you know where your fingers will go for the second part of the numeral! You try it now in the air and then on your braillewriter.

Answer 4.2



The student should have written dots 2-6.

Practice 4.3

Let's put the two cells together and practice writing the numeral 5 in Nemeth using your braillewriter. Space one time between your numerals.

When you finish writing your numerals several times, move your fingers across the braille and check your work!

Answer 4.3



The directions are to write the numeral 5 several times, so there may be variation in how many times the numeral 5 is written. Any length of line is considered correct.

Activity 5

You will need a sheet of braille paper, your braillewriter, and five objects that remind you of a train!

Write the numeral 5 in Nemeth. Then, glue your five trains onto the paper!

That was great counting and writing!

Section 5: Review

Section 5 Materials

- Braillewriter
- Braille paper
- Student Braille Document: GPK-M3-Student-Materials.brf
- Optional: one flashcard for each numeral from 1-5 in order on a nonslip surface, GPK-M3-Writing-Answers.brf
- Activity 6
 - Homemade cube labeled with Nemeth numerals 2, 3, 4, 4, 5, 5 on the 6 faces, possibly using the Nemeth Feel 'n Peel stickers
 - Unifix or snap cubes (Alternatives: MegaBlocks, Legos, teddy bear manipulatives, flashcards)
- Activity 7
 - Bin or bucket
 - Five objects
- Activity 8
 - Brightly colored construction paper or braille paper cut into train car shapes – shapes available in the curriculum
 - Glue stick
 - Braille numerals 1-5 on small cards
 - Optional: scented stickers, Wikki Stix®, buttons, or textured paper
- Activity 9
 - Cut up fruit such as banana slices, strawberries, chunks of watermelon, grapes
 - Optional: blocks of various shapes instead of fruit

Section 5 Teacher Script

Let's practice with another activity.

Activity 6

You will need a homemade cube with Nemeth numerals and Unifix cubes or other cubes that can be snapped together. If you do not have the Unifix or snap cubes, you can also use MegaBlocks, Legos, or teddy bear manipulatives designed for preschoolers. If you do not want to make a cube with Nemeth numerals, use flashcards.

Roll the homemade cube and then read the numeral. Then build a train using that number of Unifix or snap cubes. Afterwards, write the numeral using a braillewriter.

If you would like, you and a friend (or your teacher) can take turns rolling the homemade cube and building a train!

If you are using flashcards instead of the homemade cube, draw a card, read the numeral, and then build a train using that number of cubes.

Activity 7

Place 5 objects in a bin or bucket. Select some of the objects. Then count the items and braille the Nemeth numeral. Afterwards place the objects back in the bin or bucket. Now have a teacher or a friend select some objects. Then count the items and braille the Nemeth numeral!

All abroad the Nemeth train!

Practice 5.1

Read the numbers that are in order from 1 to 5.

[Make sure the student is viewing the top line of braille on page 17.]

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Answer 5.1

1 2 3 4 5

Practice 5.2

Go to the next line of braille and read the numbers from 1 to 5 again.

[Make sure the student is viewing the second line of braille on page 17.]

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Answer 5.2

1 2 3 4 5

Using the numbers in braille or your flashcards in order, tell me what number comes after 3. That's right! 4 comes after 3. Now tell me what number comes after 1. That's right! 2 comes after 1. Now tell me what number comes after 4. You got it now! 5 comes after 4.

Using the numbers in braille, tell me what number comes before 3. Way to go! 2 comes before 3. Let's try another one. Tell me what number comes before 5. That's right. 4 comes before 5.

Practice 5.3

Now practice writing your numerals 1 to 5 using your braillewriter. Space one time between your numerals. When you finish writing, move your fingers across the braille and read the numerals that you wrote!

Answer 5.3

The student should have written 1 space 2 space 3 space 4 space 5.

Activity 8

Let's build a number train. You will need: brightly colored construction paper or braille paper cut into train car shapes, glue stick, and braille numerals 1-5 on small cards.

First, find the numeral 1 and glue it onto a railroad car. Then, find the numeral 2 and glue it onto another railroad car. Then, find the numeral 3 and glue it onto another railroad car. Then, find the numeral 4 and glue it onto another railroad car. Last, find the numeral 5 and glue it onto another railroad car. Then put the railroad cars into order from 1 to 5. If you would like, you can “decorate” with scented stickers, Wikki Stix®, buttons, or textured paper.

Activity 9

Let's go wash our hands before starting this activity.

Fruit train: Use cut up fruit (such as 5 banana slices, 5 strawberries and 5 chunks of watermelon) and grapes to make a fun train snack. Count and then braille how many pieces of each fruit you use! If you would prefer, you can use blocks of various shapes to build your train.

Once you finish making your train, enjoy your fruit snack! Eat part of your fruit train, and then figure out how many train cars you have left.

Now you are ready for the next train stop: module 3 check-up! Thank you for all of your hard work!