

Pre-Kindergarten Nemeth Braille Code Curriculum  
Module 3: Nemeth Numerals 4-5  
Answer Key

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.

4



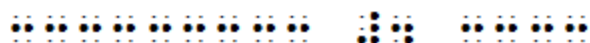
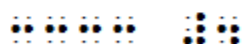
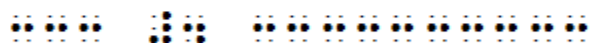
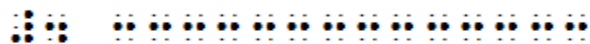
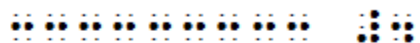
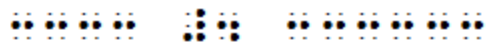
Let's use the swing cells to build the numeral 4. Tell me the dots that make a numeric indicator. That's right! Dots 3-4-5-6 make the numeric indicator! Way to go, train conductor!

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.

**Note:** *If you do not have a swing cell, use two muffin tins and tennis balls to make the numeral 4!*

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.

**Note:** *If you are using hard copy braille, the student can underline or circle the numeral 4 instead of saying "all aboard". If you would prefer, the student could also place a small sticker on top of each numeral 4.*



Answer: 

The student will say “all aboard” each time he/she points to a numeral 4 at the following places:

Line 1: toward the middle of the line

Line 2: at the end of the line

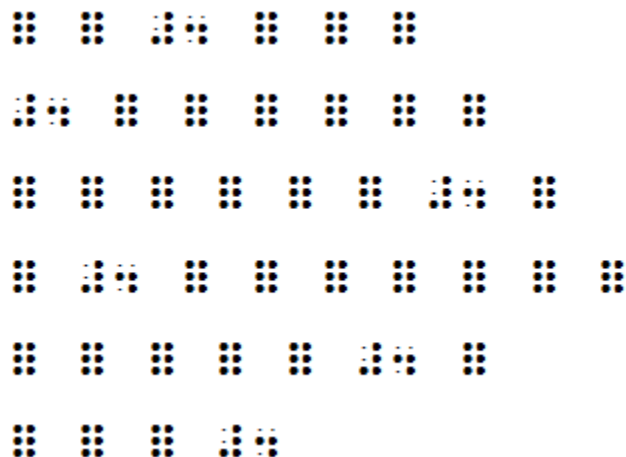
Line 3: at the beginning of the line

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



Answer: 

Line 1: 3<sup>rd</sup> item in the line

Line 2: 1<sup>st</sup> item in the line

Line 3: 7<sup>th</sup> (next to the last) item in the line

Line 4: 2<sup>nd</sup> item in the line

Line 5: 6<sup>th</sup> (next to the last) item in the line

Line 6: last item in the line

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

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

Way to go, train conductor! Continue to the next line of braille and find the numeral 4s. Say "tickets please" when you find the numeral 4.

Figure 1 displays 24 small diagrams arranged in a 6x4 grid. Each diagram shows a 3x3 grid of dots, with some dots filled (black) and others empty (white). The diagrams represent different spatial arrangements of dots, likely used for a spatial reasoning task. The patterns vary in the number of filled dots and their positions within the 3x3 grid.

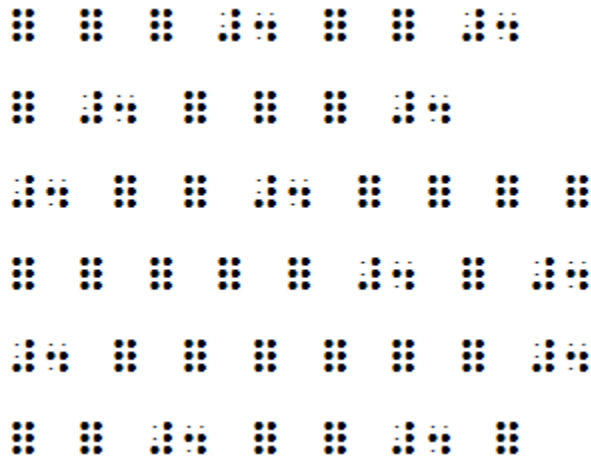
The student will say "tickets please" each time he/she points to a numeral 4 at the following places:

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

Revised 10/30/16

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

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.



Answer: 

Line 1: 4<sup>th</sup> and last items in the line

Line 2: 2<sup>nd</sup> and last items in the line

Line 3: 1<sup>st</sup> and 4th items in the line

Line 4: 6<sup>th</sup> and last items in the line

Line 5: 1<sup>st</sup> and last items in the line

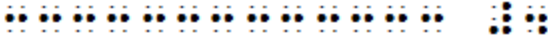
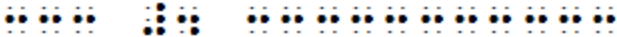


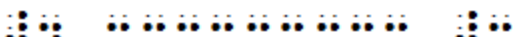
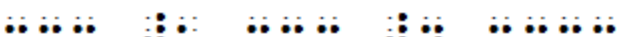
Line 6: 3<sup>rd</sup> and 6<sup>th</sup> items in the line

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.



Line 7: at the beginning of the line

Revised 10/30/16

Answer: 

The student will say “next stop” each time he/she points 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


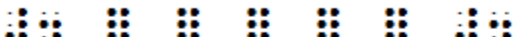



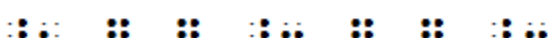
Line 4: at the end of the line

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?

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.

Answer: ⠠⠠⠠

Line 1: 4<sup>th</sup> item in the line

Line 2: 1<sup>st</sup> and last items in the line

Line 3: 3<sup>rd</sup> item in the line

Line 4: last item in the line

Line 5: 4<sup>th</sup> item in the line

Line 6: last item in the line

That was great reading, train conductor! 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!

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Answer:

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

Line 1: 4 (3<sup>rd</sup> item on answer choices)

Line 2: 1 (5<sup>th</sup> item on answer choices)

Line 3: 2 (4<sup>th</sup> item on answer choices)

Line 4: 4 (last item on answer choices)

Line 5: 3 (1<sup>st</sup> item on answer choices)

Line 6: 4 (last item on answer choices)

**Activity time:** Use your flash cards 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!

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

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!

Use your ring finger on the left and all three fingers on the right to write the numeric indicator on the Accessible Equation Editor and/or your braillewriter.

Answer: ⠠⠠

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. 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 the Accessible Equation Editor and/or your braillewriter.

Answer: ⠠⠠

Let's put the two cells together and practice writing the numeral 4 in Nemeth using the Accessible Equation Editor and/or 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!

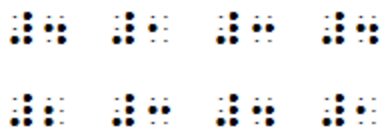
Answer: ⠠⠠ ⠠⠠ ⠠⠠ (The directions are to write the numeral 4 several times, so there may be variation in how many times the numeral 4 is written. Any length of line is considered correct.)

**Activity time:** 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. Let's practice reading numerals.





Answer:

4 1 3 4

2 3 4 1

**Activity time:** Use your flash cards 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!

5

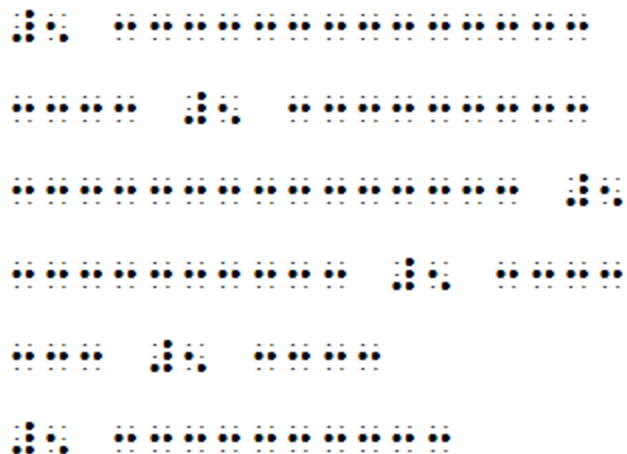


Numeral 5 begins with the numeric indicator in the first braille cell and ends with dots 2-6 in the second braille cell! Now let's use the swing cell. It is your turn to build the numeral 5 with a swing cell. Do you remember the dots that make a numeric indicator? That's right! Dots 3-4-5-6 make a numeric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

**Note:** *If you do not have two swing cells, use two muffin tins and balls.*

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!



Answer: 

The student will make his/her favorite train sound each time he/she points to a numeral 5 at the following places:

Line 1: at the beginning of the line

Line 2: toward the middle of the line

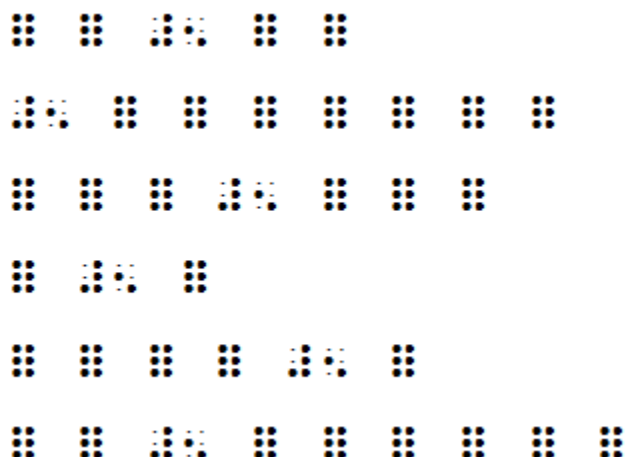
Line 3: at the end of the line

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

Whoooooosh along the rails! You found the numeral 5. 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.



Answer: 

Line 1: 3<sup>rd</sup> item in the line

Line 2: 1<sup>st</sup> item in the line

Line 3: 4<sup>th</sup> item in the line

Line 4: 2<sup>nd</sup> item in the line

Line 5: 5<sup>th</sup> item in the line

Line 6: 3<sup>rd</sup> item in the line

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

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!

Answer: 

The student will make a train whistle sound each time he/she points 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

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!

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Answer: ⠠⠠⠠

The student will make a train sound each time he/she points to a numeral 5 at the following places:

Line 1: 3<sup>rd</sup> and last items in the line

Line 2: 5<sup>th</sup> and last items in the line

Line 3: 1<sup>st</sup> and 4<sup>th</sup> items in the line

Line 4: 6<sup>th</sup> and last items in the line

Line 5: 1<sup>st</sup> and 3<sup>rd</sup> items in the line

Line 6: 2<sup>nd</sup> and last items in the line

**Fun fact:** Many major cities in the Northeast region of the United States are linked by train.

Let's find more numeral 5s. Say "choo" when you find the numeral 5 in each line. Be careful to make sure it is a numeral 5 and not a numeral 1 or 2.



Line 1: toward the middle of the line

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

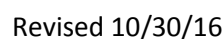
Line 3: at the end of the line

Line 4: toward the middle of the line

Line 5: at the end of the line

Line 6: toward the end of the line

Way to go, math superstar! 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.



Answer: 

Line 1: 3<sup>rd</sup> item in the line

Line 2: 2<sup>nd</sup> item in the line

Line 3: last item in the line

Line 4: 5<sup>th</sup> item in the line

Line 5: 6<sup>th</sup> (next to the last) item in the line

Line 6: 3<sup>rd</sup> item in the line

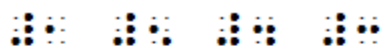

**Activity time:** You will need a homemade cube with Nemeth numerals and Unifix cubes or other cubes that can be snapped together. If you do not have the Unifix or snap cubes, you can also use MegaBlocks, Legos, or teddy bear manipulatives designed for preschoolers. If you do not want to make a cube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

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 the Accessible Equation Editor and/or 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 flash cards instead of the homemade cube, draw a card, read the numeral, and then build a train using that number of cubes.

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

Answer:

1 5 4 3

4 2 5 1

**Activity time:** Use your flash cards 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!

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!

Use your ring finger on the left and all three fingers on the right to write the numeric indicator on the Accessible Equation Editor and/or your braillewriter.

Answer: ⠠⠠

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 the Accessible Equation Editor and/or your braillewriter.

Answer: ⠠⠠

Let's put the two cells together and practice writing the numeral 5 in Nemeth using the Accessible Equation Editor and/or 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: ⠠⠠ ⠠⠠ ⠠⠠ ⠠⠠ (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 time:** 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! Let's practice with another activity.

**Activity time:** 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 aboard the Nemeth train! Read the numbers that are in order from 1 to 5.

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Answer: 1 2 3 4 5

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

⠠⠠⠠⠠⠠

Answer: 1 2 3 4 5

Using the numbers in braille or your flash cards 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.

Now practice writing your numerals 1 to 5 using the Accessible Equation Editor and/or 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: ⠠⠠⠠⠠⠠

**Activity time:** 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 sticks, buttons, or textured paper.

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

**Follow-up activity:**

**Note:** *Before beginning the activity, have the student wash his/her hands.*



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.