

Pre-Kindergarten Nemeth Braille Code Curriculum
Module 4: Nemeth Numerals 6-7
Answer Key

All aboard the Nemeth train to learn about the numerals 6 and 7!

Let's begin by reviewing what we know about how to read braille. First, how many hands will you use when reading braille? You got it! We read braille with both hands. Second, show me how you put your hands together when reading braille. That's right! Your index fingers will touch, and your fingers will be slightly curved. Third, show me how your fingers glide across the braille. Did you lightly touch the braille? It is important to use a soft and light touch across the braille.

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

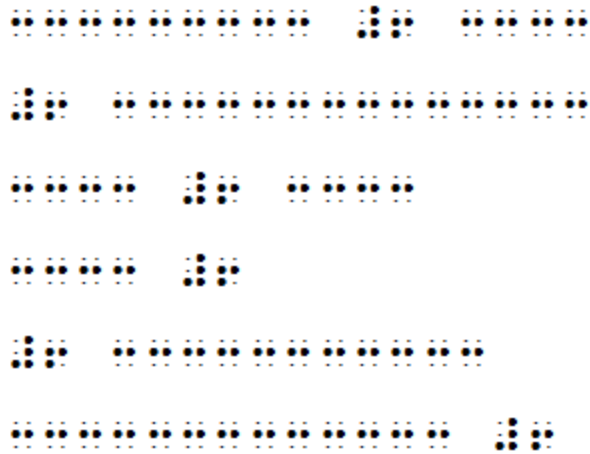
6



Let's use the swing cells to build the numeral 6. Which dots make the numeric indicator? That's right! Dots 3-4-5-6 make the numeric indicator! Use the pegs to make the numeric indicator in the first braille cell. Then move to the second braille cell and place pegs in dots 2-3-5.

Note: *If you do not have a swing cell, use two muffin tins and tennis balls to make the numeral 6!*

Now it is your turn to find the numeral 6 in each line. Move your fingers lightly across each line of braille and say "choo" whenever you find the numeral 6!



Answer: 

The student will say "choo" each time he/she points to a numeral 6 at the following places:

Line 1: toward the middle of the line

Line 2: at the beginning of the line

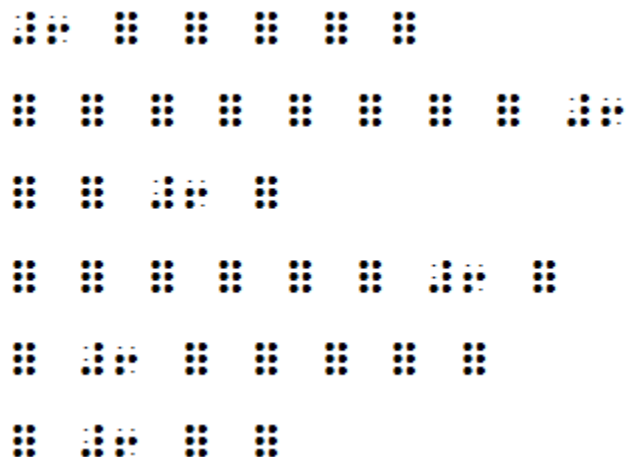
Line 3: in the middle of the line

Line 4: at the end of the line

Line 5: at the beginning of the line

Line 6: at the end of the line

Excellent work, train conductor! You found the numeral 6 in each line. Now find the numeral 6 hidden in a line of railroad cars, which are really full braille cells.



Answer: ⠠⠠⠠

Line 1: 1st item in the line

Line 2: last item in the line

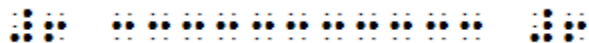
Line 3: 3rd item in the line

Line 4: 7th (next to the last) item in the line

Line 5: 2nd item in the line

Line 6: 2nd item in the line

Sometimes a line of braille may have more than one numeral 6. Move your fingers lightly across the line of braille and find the numeral 6s. Remember to use both of your hands and keep your fingers slightly curved.



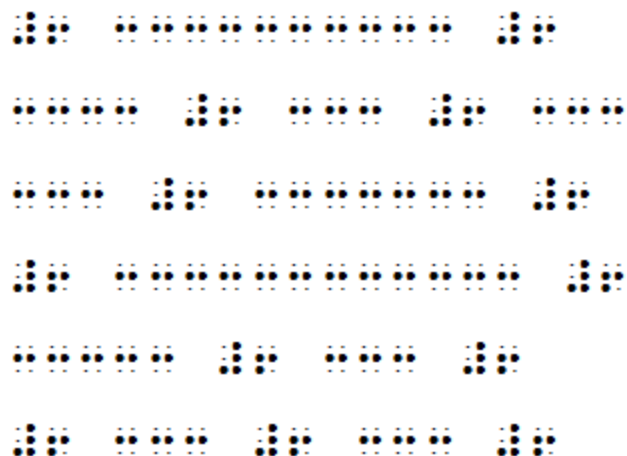
Answer: ⠠⠠⠠

The student should point to the numeral 6 at the beginning of the line and then to the numeral 6 at the end of the line.

Fun fact: Some trains have an engine at the front and another at the back.

You are making great progress, math superstar! Continue to the next line of braille and find the numeral 6s. Say “the wheels on the train go round and round” when you find the numeral 6.

Note: *If you are using hard copy braille, the student can underline or circle the numeral 6 instead of saying “the wheels on the train go round and round”. If you would prefer, the student could also place a small sticker on top of each numeral 6.*



Answer: 6

The student will say “the wheels on the train go round and round” each time he/she points to a numeral 6 at the following places:

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

Line 2: slightly before the middle of the line and toward the end of the line

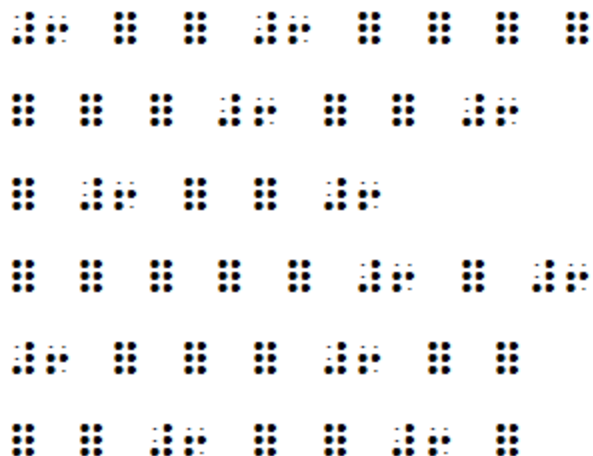
Line 3: slightly before the middle of the line and at the end of the line

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

Line 5: in 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

Chug-chug-chug-chug! Move your fingers lightly over the braille and find the numeral 6s that are hiding in the line of railroad cars, which are really full braille cells.



Answer: 

Line 1: 1st and 4th items in the line

Line 2: 4th and last items in the line

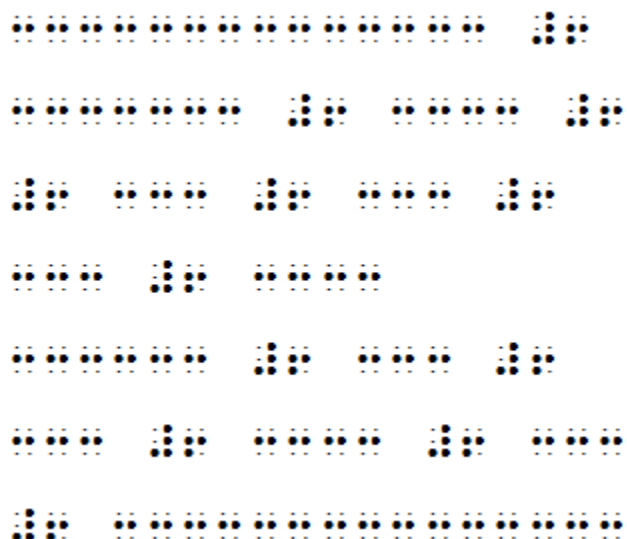
Line 3: 2nd and last items in the line

Line 4: 6th and last items in the line

Line 5: 1st and 5th items in the line

Line 6: 3rd and 6th items in the line

Let's find the numeral 6 again! This time say "wwwwooo" like the train whistle when you find the numeral 6! On some lines you find only 1 numeral 6 and on other lines you may find several numeral 6s.



Answer: 

The student will say “wwwwooo” each time he/she points to a numeral 6 at the following places:

Line 1: at the end of the line

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

Line 3: at the beginning of the line, in the middle of the line and at the end of the line

Line 4: toward the middle of the line

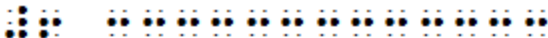
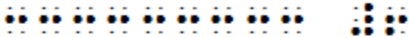
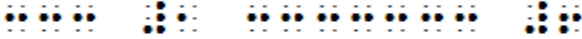
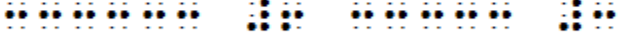


Line 5: toward the middle of the line and at the end of the line

Line 6: slightly before the middle of the line and slightly after the middle of the line

Line 7: at the beginning of the line

Fun fact: When a train only has one rail, it is called a monorail.

Sometimes a line of braille has more than one numeral. Find the numeral 6 in each line of braille. Say “all aboard” like a conductor when you find the numeral 6 in the line. Be careful to make sure it is a numeral 6 and not 1, 2, or 3. Just find the 6s.

Answer: 

The student will say “all aboard” each time he/she points to a numeral 6 at the following places:

Line 1: at the beginning of the line

Line 2: at the end of the line

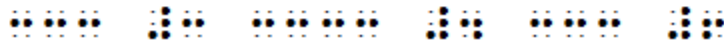
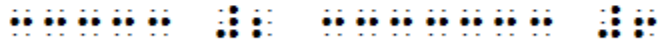
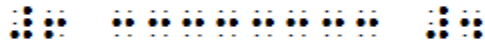
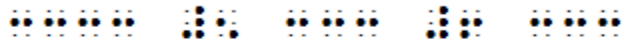
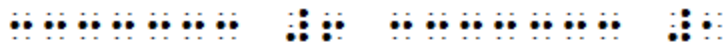
Line 3: at the end of the line

Line 4: in the middle of the line

Line 5: at the beginning of the line

Line 6: slightly after the middle of the line

Excellent work! Did you know that the word 'train' comes from French? Find the numeral 6 in each line. Be careful to make sure it is a numeral 6 and not 1, 2, 3, 4, or 5. Once again find just the 6s.



Answer: 

The student should point to a numeral 6 at the following places:

Line 1: in the middle of the line

Line 2: toward the end of the line

Line 3: at the beginning of the line

Line 4: at the end of the line

Line 5: at the end of the line

Move your fingers lightly over the braille lines and find some more numeral 6s that are hiding in a line of magnet railroad cars and other numerals.

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Answer: ⠠⠠

Line 1: 4th item in the line

Line 2: 1st item in the line

Line 3: last item in the line

Line 4: 3rd item in the line

Line 5: 4th item in the line

Line 6: last item in the line

That was super! Let's find a few more numeral 6s hiding in a line of full braille cells and other numerals. Say "rail ticket" when you find a numeral 6.

Note: *If you are using hard copy braille, the student can underline or circle the numeral 6 instead of saying "rail ticket". If you would prefer, the student could also place a small sticker on top of each numeral 6.*

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Answer: 

The student will say “rail ticket” each time he/she points to a numeral 6 at the following places:

Line 1: 4th item in the line

Line 2: 6th item in the line

Line 3: 2nd item in the line

























































Line 4: 3rd item in the line

Line 5: last item in the line

Line 6: 6th item in the line

Fun fact: A boxcar is a specially designed railroad car for carrying goods. A boxcar usually has high sides and a roof, so nothing falls out when the train is moving!

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!

Answer:

Line 1: 6 (5th item on answer choices)

Line 2: 6 (3rd item on answer choices)

Line 3: 2 (4th item on answer choices)

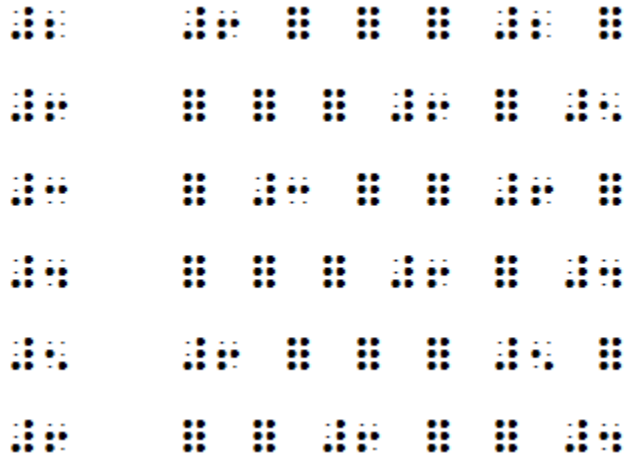
Line 4: 5 (4th item on answer choices)

Line 5: 3 (1st item on answer choices)

Line 6: 4 (last item on answer choices)

Line 7: 6 (4th item on answer choices)

That was great reading, train conductor! Just like last time, 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!



Answer:

Line 1: 2 (5th item on answer choices)

Line 2: 6 (4th item on answer choices)

Line 3: 3 (2nd item on answer choices)

Line 4: 4 (last item on answer choices)

Line 5: 5 (5th item on answer choices)

Line 6: 6 (3rd item on answer choices)

Activity time: Use your flash cards to practice reading the numerals 1-6. 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? Try one more time!

Fun fact: The world's longest freight train was pulled by 16 diesel engines and had 660 box cars.

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. Now open the swing cell. This will help you know where your fingers will go when you are writing!

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

Answer: ⠠⠠⠠⠠⠠⠠

Now let's finish the numeral 6. With your second swing cell, place the pegs in dots 2-3-5. Now open the swing cell. Use the middle and ring fingers on your left hand as well as the middle finger 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 practice writing the numeral 6 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 6 several times, so there may be variation in how many times the numeral 6 is written. Any length of line is considered correct.)

Activity time: You will need a sheet of braille paper and your braillewriter. Use your braillewriter to create 6 lines of full braille cells and numeral 6s for you, a teacher and/or a friend to read.

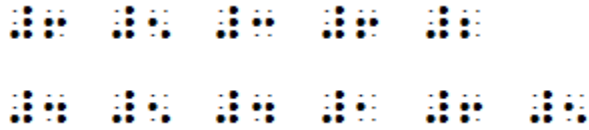
Make some of your lines long and some of the lines short. Use your thumb to space one time between your full braille cells and the numeral 6s. Also push your line spacing key twice at the end of a line to double space your lines of braille.

When you are finished, check your work and have fun reading the lines of braille you created!

Now try to find the shortest line and then the longest line. Don't forget to let a teacher or friend read the braille too!

Fun fact: Underground trains are very important in cities because cars, taxis, and buses get stuck in traffic. In the United States, we call underground trains "subways".

That was great writing, train conductor. Let's practice reading numerals.



Answer:

6 5 3 6 2

4 5 4 1 6 5

Activity time: Use your flash cards and find all of the numeral 6s. Place all the 6s in one stack and all the other numerals in a different stack.

Note: *This would be a good time to use a sorting tray.*

Let's explore the numeral 7 in Nemeth!

7



Numeral 7 begins with the numeric indicator in the first braille cell and ends with dots 2-3-5-6 in the second braille cell! Now let's use the swing cell. It is your turn to build the numeral 7 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 2-3-5-6. Congratulations! You made the numeral 7.

Note: *If you do not have two swing cells, use two muffin tins and balls to make the numeral 7!*

Now it is your turn to find the numeral 7 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 7!

..... 7
 7
 7
 7
 7
 7

Answer: 7

The student will make his/her favorite train sound each time he/she points to a numeral 7 at the following places:

Line 1: at the end of the line

Line 2: toward the middle of the line

Line 3: at the beginning of the line

Line 4: slightly after the middle of the line

Line 5: at the beginning of the line

Line 6: in the middle of the line

Train tickets, please! You found the numeral 7. Now move your fingers across each line of braille and find the numeral 7 hidden in a line of railroad cars, which are really full braille cells.

7 7 7 7 7
 7 7 7 7 7 7 7 7
 7 7 7 7 7 7 7
 7 7 7
 7 7 7 7
 7 7 7 7 7 7 7 7 7

Answer: ⠼⠼⠼

Line 1: last item in the line

Line 2: 1st item in the line

Line 3: 4th item in the line

Line 4: 2nd item in the line

Line 5: 1st item in the line

Line 6: 3rd item in the line

Tell me what the numeral 7 feels like to you. Then tell me what you like about trains. What is your favorite train fact?

Now there will be more than one numeral 7 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 7!

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Answer: ⠼⠼⠼

The student will make a train whistle sound each time he/she points to a numeral 7 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

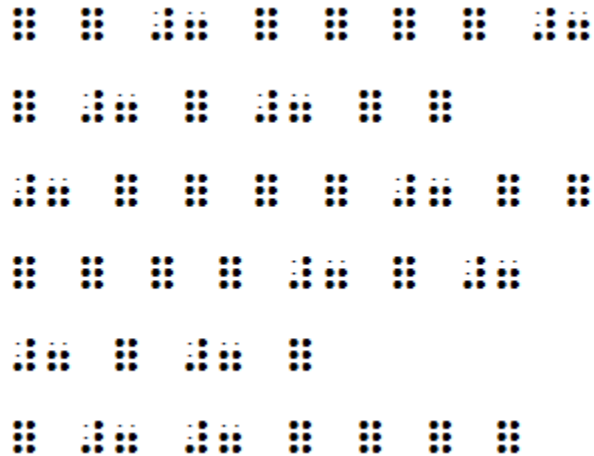
Line 3: slightly before the middle of the line and slightly after the middle of the line

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

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

Line 6: slightly before 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 7s. They are hidden in a line of railroad cars, which are really full braille cells. Say "all aboard" each time you find the numeral 7!



Answer:

The student will say "all aboard" each time he/she points to a numeral 7 at the following places:

Line 1: 3rd and last items in the line

Line 2: 2nd and 4th items in the line

Line 3: 1st and 6th items in the line

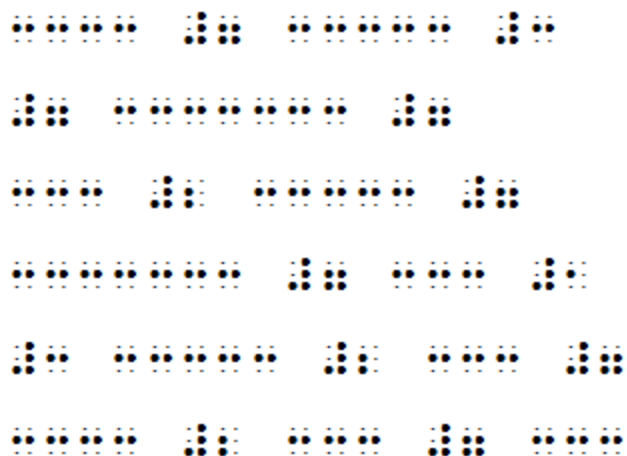
Line 4: 5th and last items in the line

Line 5: 1st and 3rd items in the line

Line 6: 2nd and 3rd items in the line

Fun fact: Some cities have subways that run above the ground or on the ground.

Let's find more numeral 7s. Say "choo choo" when you find the numeral 7 in each line. Be careful to make sure it is a numeral 7 and not a numeral 1, 2, or 3.



Answer: 

The student will say “choo choo” each time he/she points to a numeral 7 at the following places:

Line 1: slightly before the middle of the line

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

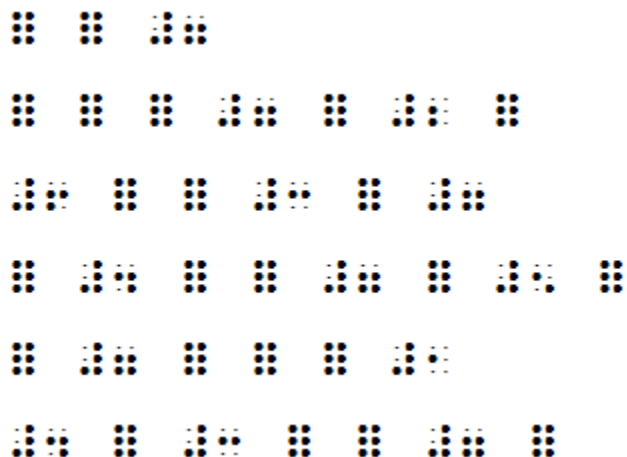
Line 3: at the end of the line

Line 4: toward the middle of the line

Line 5: at the end of the line

Line 6: toward the end of the line

You are a math superstar! Let’s find some more numeral 7s that are hiding in a line of railroad cars and numerals 1, 2, 3, 4, 5, and 6. Remember to find only the numeral 7s.



Answer: 

Line 1: 3rd item in the line

Line 2: 4th item in the line

Line 3: last item in the line

Line 4: 5th item in the line

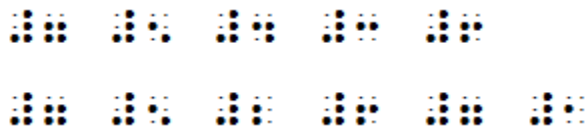
Line 5: 2nd item in the line

Line 6: 6th item in the line

Activity time: You will need a set of flash cards labeled 1-7, craft sticks and an assortment of foam stickers. Shuffle the flash cards and draw a card. Read the numeral on the card and then build a “train” on a craft stick using that number of foam stickers. If you would like, you and a friend (or your teacher) can take turns drawing a card and creating a craft stick train!

Once you are finished, keep your craft stick trains for a future activity.

Now let’s practice reading numerals 1 to 7.



Answer:

7 5 4 3 6

7 5 2 6 7 1

Activity time: Use your flash cards to practice reading the numerals 1-7. 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? Try one more time! Good luck, math superstar!

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 on the braille keys!

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

Answer: ⠠⠼

Now let's finish the numeral 7. On the second swing cell, place the pegs in dots 2-3-5-6. Use the middle and ring fingers on your left hand and the middle and ring fingers 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 7 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 7 several times, so there may be variation in how many times the numeral 7 is written. Any length of line is considered correct.)

Activity time: You will need a sheet of braille paper, your braillewriter, a plastic cup, and your craft stick trains. If you would prefer, you can use the Accessible Equation Editor instead of your braillewriter.

Put all of the craft stick trains in the plastic cup. Then take one of the trains out of the cup and count how many foam stickers are on the train. Then write how many foam stickers you counted. Repeat the process until all of the craft stick trains are gone.

Keep your craft stick trains to use in a future module.

All abroad the Nemeth train! Read the numbers that are in order from 1 to 7.

⠠⠼⠠⠼⠠⠼⠠⠼⠠⠼⠠⠼⠠⠼

Answer: 1 2 3 4 5 6 7

Go to the next line of braille and read the numbers in order from 1 to 7 again.

⠠⠼⠠⠼⠠⠼⠠⠼⠠⠼⠠⠼⠠⠼

Answer: 1 2 3 4 5 6 7

Activity time: You will need flash cards with numbers from 1 to 7. Shuffle the flash cards. Then place the numbers in order from 1 to 7. Use the line of braille with the numbers in order to assist you if needed.

Note: *If needed, provide the student with a hard copy of numbers in order to use as a model. It may also help to place the flash cards on a nonslip surface such as rubber shelf liner so they will not move as much.*

Using the numbers in braille or your flash cards in order, what number comes after 5? That's right! 6 comes after 5. What number comes after 3? Perfect! 4 comes after 3. Now what number comes after 6? Way to go! 7 comes after 6.

Using the numbers in braille, what number comes before 6? Way to go! 5 comes before 6. Let's try another one. What number comes before 7? That's right. 6 comes before 7.

Now practice writing your numerals 1 to 7 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 you wrote!

Answer: ⠠⠠⠠⠠⠠⠠⠠

Activity time: Let's continue to build our number train. You will need: railroad cars with numerals 1-5 from the last module, brightly colored construction paper or braille paper cut into train car shapes, glue stick, and braille numerals 6-7 on small cards.

First, find the numeral 6 and glue it onto a railroad car. Then, find the numeral 7 and glue it onto another railroad car. Then put the railroad cars into order from 1 to 7. If you would like, you can "decorate" with scented stickers, Wikki sticks, buttons, or textured paper.

Click-clack click-clack! Now you are ready to go down the track: module 4 check-up! Thank you for all of your hard work!

Follow-up activity:

In order to build a "shoebox" train, you will need at least 2 shoeboxes, brightly colored construction paper, string, scissors and glue. You will also need a set of flash cards with numerals 1-7. Before building a "shoebox" train, read the book entitled *Locomotive* by Brian Floca and learn how a railroad was built across the United States in the 1800s.

What did you learn about train travel in the 1800s?

Now we are ready to make a “shoebox” train to pull around the school or house. First, take the lids off the shoeboxes. We will not be using them. Second, cover the sides of the shoeboxes with construction paper. You can also use textured paper or material if you would prefer. Third, make pretend wheels for the railroad cars. Cut circles out of textured paper and glue them on the sides of the shoeboxes as the train wheels. You can also use large buttons or foam stickers in the shape of circles for the train wheels.

Then I will poke small holes in the sides of the boxes and help you thread some pieces of string (or shoelaces) through the holes. We will tie knots in the string so that they will not slip back through the holes. Don’t forget to include a string or rope on the front too. You may also enjoy “decorating” the railroad cars with scented stickers, Wikki sticks, buttons, or textured paper/material.

Once you are finished, enjoy pulling the train around the room. Afterwards, count how many railroad cars you made and write the numeral on either the Accessible Equation Editor and/or your braillewriter. Next count how many wheels are on the first railroad car. Write the numeral. Next count how many wheels are on the second railroad car. Write the numeral.

Now shuffle the flash cards with the numerals 1-7. Draw one flash card. Place that many stuffed animals or toys in the railroad cars and pull them to a different train station. When you arrive, announce the name of the train station and take the stuffed animals or toys out of the railroad cars. Repeat the process until you have used all of the flash cards. If you would like, you and a friend (or a teacher) can take turns drawing flash cards and playing with the train!