

An Introduction to Nemeth Code Symbols Used in Grades 2 to 5 and Strategies for Supporting Elementary Students in Building Math Skills

Lesson 6: Building a Strong Educational Team



University of South Carolina Upstate, Summer 2020

Lesson 6 Objectives

Participants will be able to:

1. Describe the roles of professionals who are supporting students in grades 2-5 taking math classes.
2. Describe the responsibilities of the teacher responsible for math education content.
3. Identify ways that students can complete their assignments for those who do not read braille.
4. Explain how professionals can encourage students and sighted peers working together.

The Role of the TSVI in Supporting the Student and the Math Teacher

- Evaluate the student's compensatory academic skills and make recommendations to the math teacher on appropriate teaching strategies.
- Teach specialized computation methods for completing math work (e.g., abacus, braillewriter).
- Teach the student to use tactile graphics efficiently to gather information.

The Role of the TSVI in Supporting the Student and the Math Teacher, cont.

- Teach the student to make tactile graphics.
- Prepare and provide braille materials so the student can access the material at the same time as sighted peers.
- Provide hands-on manipulatives and equipment to facilitate access.

Math Standards Aren't Just for Math Teachers!

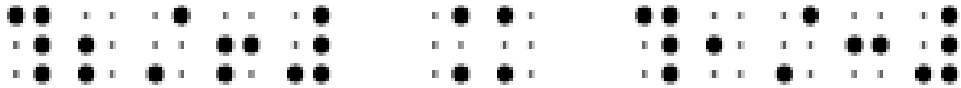
- Have knowledge of your state's math standards.
- Review the standards and determine what Nemeth Code symbols and math concepts the student will need to succeed.
- Know the strengths and needs of your student in relation to math concepts and math skills.
- Communicate with the math teacher to be consistent in the use of terminology and strategies.
- Common Core State Standards
<http://www.corestandards.org/Math/>

Get Your Terms On!

**Finding
Equivalent
Fractions???**

Simplify???

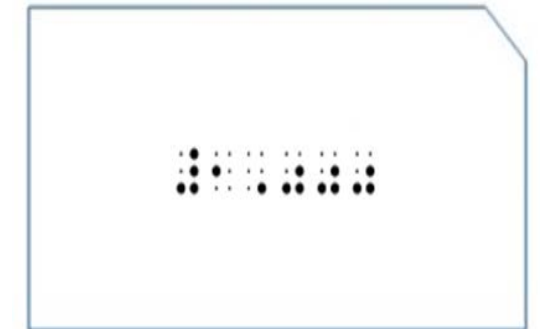
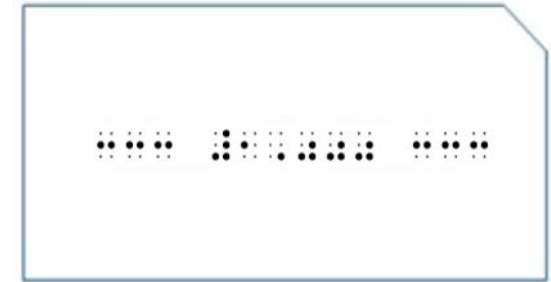
Reduce???

$$\frac{2}{6} = \frac{1}{3}$$


The Braille representation of the equation $\frac{2}{6} = \frac{1}{3}$ is shown below. It consists of three groups of Braille characters: the first group represents the fraction 2/6, the second group represents the equals sign, and the third group represents the fraction 1/3.

Pre-Teach

- What content is being taught in the math class?
- What Nemeth Code symbols will be new in the content?
- What hands-on material can you familiarize the student with ahead of time so they can use them in the math class?
- What tools will the class be using? Does your student know how to use the tools? Does your student need an adapted tool?
- Has the student been exposed to the type of tactile graphic before?



Role of the Math Teacher

- Teach math to all students including the student who is blind.
- Ask the student what they're thinking and/or need to succeed.
- Provide materials and the "game plan" ahead of time.
- Have expectations for the student to succeed.
- Ensure the student has access to what's on the "board."
VERBALIZE!!
- Ensure the student can access diagrams, demonstrations, and models.

Paraprofessionals: It's a Tough Job!

- Recognize their role is to support and not interfere with the student's responsibilities.
- Promote the child's independence.
- Communicate with all team members to share what's working for the student and what's not.
- Ensure the student has braille materials, manipulatives, and tools necessary for the class.
- Be available for "last minute" access.
- Provide tech support when necessary.

Ways Students Can Complete Assignments

- Braillewriter
 - Students can use Nemeth Code switch indicators.
- Braille notetaker
 - Students use keystrokes to move between UEB and Nemeth Code.
- Draftsman, Tactile Doodle, or inTACT Sketchpad
- Crayons / grease markers
- Collage supplies for making tactile graphics

Fostering Engagement with Sighted Peers

- Partners to draw what's on the board (e.g., on the Draftsman).
- Have the braille reader add braille to group projects.
- Provide similar hands-on materials (e.g., Omnifix cubes) for the students to work together.
- Encourage students to ask questions of peers, rather than an adult.
- Encourage the math teacher to assign the student to a group, not to the paraprofessional.
- Have the student pair their notetaker to a screen so sighted individuals can see what they're writing.