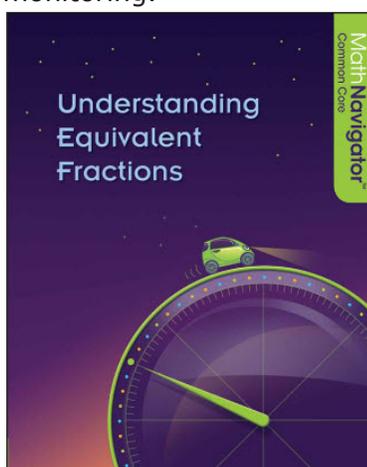


## Program Overview

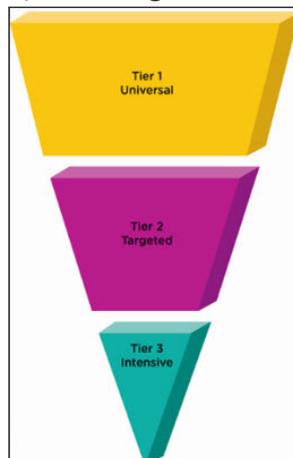
**Introduction** This guide explains the program components and philosophy of the research-based program, Math Navigator, Common Core Edition.

**Program Structure** Math Navigator blends conceptual understanding, problem solving, and foundational skills. The program focuses on repairing the misconceptions of critical concepts and building routines, rituals, and data-driven progress monitoring.



Math Navigator is a supplemental program designed for students in Grades 1–8. You can use it to strengthen core skills for struggling high school students.

It is designed for you to use primarily as a Tier 2 intervention, but you can also use it as Tier 1 and 3 intervention. Math Navigator is intended to augment—not replace—students’ core curriculum. You or your students’ parents can implement the program during school hours, after school, on weekends, or during summer programs.



The design of Math Navigator enables you to target instruction to your students' needs. The program consists of twenty-six modules; each module is focused on a critical math topic.



Math Navigator assigns students to a module according to the results of a pre-test; this ensures that students receive targeted remediation based on need, not grade level. It enables you to deliver differentiated instruction to prepare your students for the Common Core State Standards (CCSS). A post-test at the end of each module measures improvement.

The form is titled 'Place Value: From Decimals to Billions Pre-Test' and is part of 'AMERICA'S CHOICE'. It contains the following sections:

- Class Information:** School \_\_\_\_\_, City \_\_\_\_\_ State \_\_\_\_\_, Teacher \_\_\_\_\_.
- Student Information:** Grade \_\_\_\_\_ Student ID \_\_\_\_\_, First Name \_\_\_\_\_, Last Name \_\_\_\_\_, Date of Birth \_\_\_\_\_ (month) \_\_\_\_\_ (day) \_\_\_\_\_ (year), Male  Female , Do you usually speak English at home? Yes  No .

You can administer the pre- and post-test through the Assessment and Reporting Online (ARO) system. The ARO reports, whether generated from tests given online or via paper and pencil, are full of rich, instructionally-relevant information. They are powerful tools for providing progress monitoring, determining instructional direction, differentiating instruction, and analyzing students' growth.



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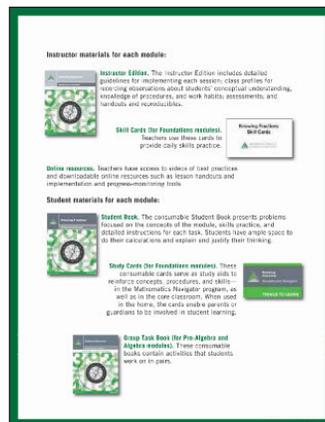
## Program Components

Math Navigator is organized by module. Each module has its own instructor and student materials.

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## Instructor Materials

Your Instructor's Edition contains detailed guidelines for implementing each session. This includes assessments and Class Profiles you can use to record observations about students' conceptual understanding.



During the Show Me section of each lesson, you will use the Show Me Cards to engage your students in the lesson and gauge their understanding of the lesson material prior to teaching it.

**show me**

**RESPONSE**

Begin the lesson by using Show Me Cards FAN 10-1 through 10-5. During today's show me, students will find what fraction is shown by an arrow making multiple hops on the number line. Have students answer the following questions on their response boards.

Write the fraction that is shown by this arrow ...

- FAN 10-1: Answer:  $\frac{5}{8}$
- FAN 10-2: Answer:  $\frac{6}{6}$
- FAN 10-3: Answer:  $\frac{2}{3}$
- FAN 10-4: Answer:  $\frac{4}{8}$
- FAN 10-5: Answer:  $\frac{3}{4}$

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## Student Materials

The student materials consist of a consumable student book and a set of Study Cards for each student.

The student book presents problems that are focused on the concepts of the module, skills practice, and detailed instructions for each task. Your students are encouraged to use higher-order thinking skills as they explain and justify their answers when working on individual or small-group work. The Study Cards serve as study aids to reinforce concepts, procedures, and skills. You can also use these cards in your regular classroom, and parents can use them to reinforce math skills at home.



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## Math Navigator and the Standards for Mathematical Practice

Math Navigator helps students develop the Standards for Mathematical Practice. The eight practices are embedded in the Class Profile to help you document your students' use of the practices.

Class Profile Assessment	
P8	Relates fractions to division problems
C1	Understands what unit fractions represent
C2	Understands that fractions can represent part of a whole
C6	Interprets fractions using area models, set models, or number line models
C7	Recognizes that understanding a fraction's value involves breaking a whole into equal parts

Throughout the lessons, students engage in the practices as they build their conceptual understanding and become more proficient math students. The Mathematical Practices chart allows you to record each time a student uses a math practice so that you can share it with the rest of the class.

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## Math Navigator Routines

Math Navigator lessons are organized based on a set of routines, including Show Me, Setting the direction, Work time, Probing for understanding, and Reflection. These consistent routines enable students to move from task to task independently, interact purposefully with each other, and become more productive learners.

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## Math Navigator Assessments

The Math Navigator program also has embedded assessments that help you analyze students' growth.

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### Pre-Test

Administer the pre-test at the beginning of each module to obtain diagnostic data and target instruction to students' areas of need. Wrong answers are correlated to specific misconceptions to help you identify flaws in students' understanding.

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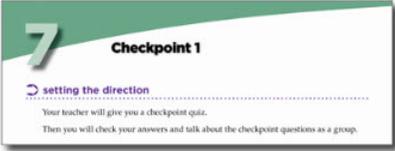
### Checkpoints

Checkpoints, which you use to evaluate students' progress, occur every five to seven sessions. During checkpoint lessons, students answer questions in a test-like atmosphere and then work as a group to learn from their answers.

 **setting the direction**

This lesson is a checkpoint lesson. In checkpoint lessons, students answer questions in a test-like atmosphere and then work as a group to learn from the checkpoint.

You will find all the materials you need for this lesson in the *Fractions as Numbers Assessment Resources* that you downloaded from ARO before Lesson 1. Make copies of Checkpoint 1 and Learning from the Checkpoint for each student in your class. To conduct the lesson, follow the instructions for Checkpoint 1.



**7 Checkpoint 1**

**setting the direction**

Your teacher will give you a checkpoint quiz. Then you will check your answers and talk about the checkpoint questions as a group.

Student Book, page 20

These checkpoints encourage students to ask members of their groups what they did wrong if they missed a problem on the checkpoint. If they correctly complete a problem, the checkpoint encourages them to share something interesting or unusual from their solution.

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**Post-Test**

Upon completing the module, students take a post-test that measures their improvement. Wrong answers are correlated to specific misconceptions, so that you can address the areas where your students still need to revise their thinking.

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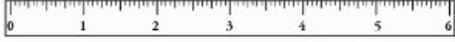
**ARO Reports**

These pre- or post-tests—given online or via paper and pencil—generate the ARO reports. These reports are full of rich, instructionally-relevant information to help your students understand the concepts in each of the Math Navigator modules.

**Question 14 of 40**

Arrange these fractions in order from least to greatest.  
Use this ruler to help you solve this problem.

$\frac{7}{8}, \frac{7}{4}, 1\frac{1}{2}, \frac{11}{16}$



A.   $1\frac{1}{2}, \frac{7}{4}, \frac{7}{8}, \frac{11}{16}$       B.   $\frac{11}{16}, \frac{7}{8}, 1\frac{1}{2}, \frac{7}{4}$

C.   $\frac{11}{16}, \frac{7}{8}, \frac{7}{4}, 1\frac{1}{2}$       D.   $\frac{7}{4}, 1\frac{1}{2}, \frac{7}{8}, \frac{11}{16}$

[Submit and Go to Next Question](#)      [Submit and Review all Test Responses](#)

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**Review**

This guide explained that the Math Navigator program consists of twenty-six modules in which each one focuses on a critical math topic. It also explained that the ARO system enables you to confidently place your students in the appropriate module.

This guide introduced how you will deliver the instruction for these modules using detailed guidelines for implementing each session in the Instructor's Edition. Your students will learn in an engaging, instructional model that fosters collaboration.

Finally, it described how the Math Navigator program offers embedded assessments that help you analyze students' growth through pre-tests, checkpoints, and post-tests.