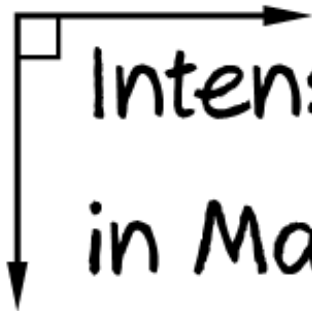
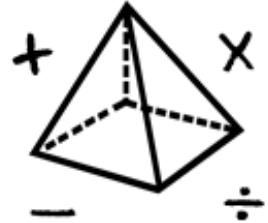




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Intensive Interventions  
in Mathematics



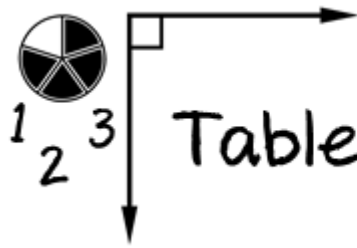
# Module 1

## Activity Workbook

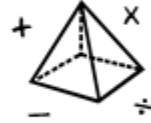
National Center on  
**INTENSIVE INTERVENTION**

at American Institutes for Research ■

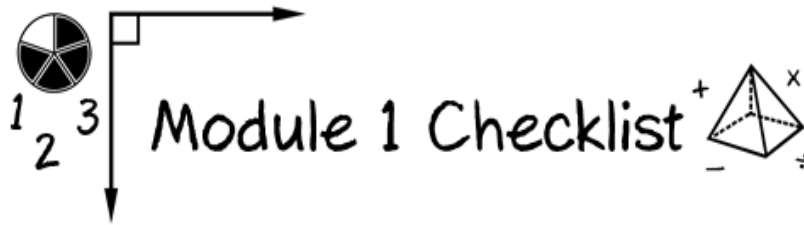
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# Table of Contents



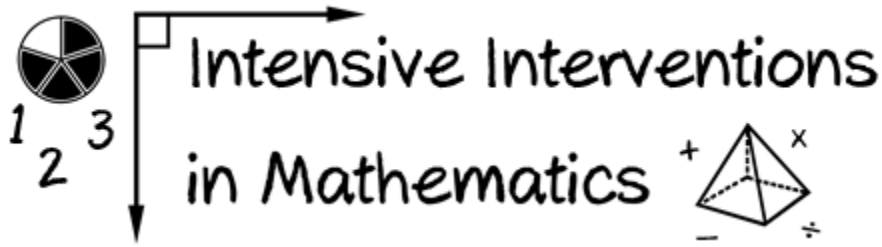
<b>Contents</b>	<b>Page</b>
<b>Module 1 Checklist</b>	<b>3</b>
<b>Activity #1 – Examine NAEP Data</b>	<b>4</b>
<b>Journal Entry – Provide Rationale for Intensive Intervention</b>	<b>5</b>
<b>Activity #2 – Put Operations Standards in Order</b>	<b>6</b>
<b>Activity #3 – Put Problem-Solving Content in Order</b>	<b>7</b>
<b>Activity #4 – Determine Foundational Skills to Include</b>	<b>8</b>
<b>Discussion Board – Reflect Upon Upcoming Lessons</b>	<b>9</b>
<b>Activity #5 – Determine Skill Needed to Successfully Solve Problems</b>	<b>10</b>
<b>Activity #6 – Determine Intervention Needs for a Student</b>	<b>11</b>
<b>Classroom Application: Identify and Map Foundational Mathematics Skills</b>	<b>12-13</b>
<b>Resources: Standards</b>	<b>14</b>



# Module 1 Checklist

The purpose of this Activity Workbook is to help organize content for this Module. You will do some Activities on your own to help you engage with and think about the content. You will not be required to submit your responses for those activities. There are other activities, however, that you will submit online and apply in your classroom. The activities that you must submit before completing this Module are listed in the “Online” column below.

Section	Assignment	To Be Completed In Activity Workbook	To Be Completed Online	To Be Completed With Coach
Intro	Video		<input type="checkbox"/> Watch Module 1 Introduction Video Presentation	
	Video		<input type="checkbox"/> Watch Module 1 Part 1 Video Presentation	
Part 1	Activity 1	<input type="checkbox"/> Examine NAEP Data		
	Journal		<input type="checkbox"/> Journal Entry: <i>Provide Rationale for Intensive Interventions in Math</i>	
Part 2	Video		<input type="checkbox"/> Watch Module 1 Part 2 Video Presentation	
	Activity 2	<input type="checkbox"/> Put Operations Standards in Order		
	Activity 3	<input type="checkbox"/> Put Problem-Solving Standards in Order		
	Activity 4	<input type="checkbox"/> Determine Skill Gaps		
	Discussion		<input type="checkbox"/> Discussion Board: <i>Ponder Upcoming Lessons</i> <input type="checkbox"/> Write Your Response <input type="checkbox"/> Respond to 2 Others	
Part 3	Video		<input type="checkbox"/> Watch Module 1 Part 3 Video Presentation	
	Activity 5	<input type="checkbox"/> Determine Skills Needed to Successfully Solve Problems		
	Activity 6	<input type="checkbox"/> Determine Intervention Needs for a Student		
Next Steps	Video		<input type="checkbox"/> Watch Module 1 Closing Video Presentation	
	Classroom Application			<input type="checkbox"/> Identify Foundational Skills Needed in Your Classroom



- Module 1
- Part 1
- Activity #1

**Look at NAEP data for students with disabilities.**

(The National Assessment of Educational Progress: Nation's Report Card)

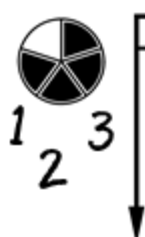
Go to [https://www.nationsreportcard.gov/reading\\_math\\_2015/#mathematics/acl?grade=4](https://www.nationsreportcard.gov/reading_math_2015/#mathematics/acl?grade=4)

- Scroll down to section titled: **ACHIEVEMENT LEVELS BY STUDENT GROUPS**
- Under SELECT A STUDENT GROUP, use the drop-down menu to select: *Status as students with disabilities*
- Compare the two graphs
- To access 8th grade scores, scroll back up to heading **ACHIEVEMENT LEVELS BY STUDENT GROUPS**
- Click 8th Grade selector
- Under SELECT A STUDENT GROUP, use the drop-down menu to select: *Status as students with disabilities*

**What's the level of performance (of students with disabilities) compared to students without disabilities?**

**What does this tell you about the necessity of intensive intervention?**





# Intensive Interventions in Mathematics



- Module 1
- Part 2
- Activity #2



Place the operations content in order from easier skills to more difficult skills.

(Number from 1-8.)

Explain why addition and subtraction strategies work, using place value and the properties of operations.

\_\_\_\_\_

Apply properties of operations as strategies to multiply and divide.

\_\_\_\_\_

Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.

\_\_\_\_\_

Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.

\_\_\_\_\_

Find whole number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division.

\_\_\_\_\_

Apply the properties of operations to generate equivalent expressions.

\_\_\_\_\_

Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

\_\_\_\_\_

Apply properties of operations as strategies to add and subtract.

\_\_\_\_\_



# Intensive Interventions in Mathematics



- Module 1
- Part 2
- Activity #3



Place the problem-solving content in order from easier skills to more difficult skills.

(Number from 1-9.)

Solve multi-step word problems posed with whole numbers and having whole-number answers using the four operations.

\_\_\_\_\_

Use multiplication and division within 100 to solve word problems.

\_\_\_\_\_

Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20.

\_\_\_\_\_

Interpret and compute quotients of fractions and solve word problems involving division of fractions by fractions.

\_\_\_\_\_

Use addition and subtraction within 100 to solve one- and two-step word problem.

\_\_\_\_\_

Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators.

\_\_\_\_\_

Solve addition and subtraction word problems and add and subtract within 10.

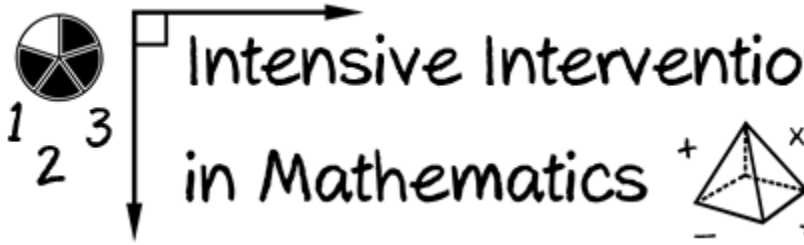
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Solve real-world and mathematical problems leading to two linear equations in two variables.


\_\_\_\_\_

Solve real-world and mathematical problems involving the four operations with rational numbers.

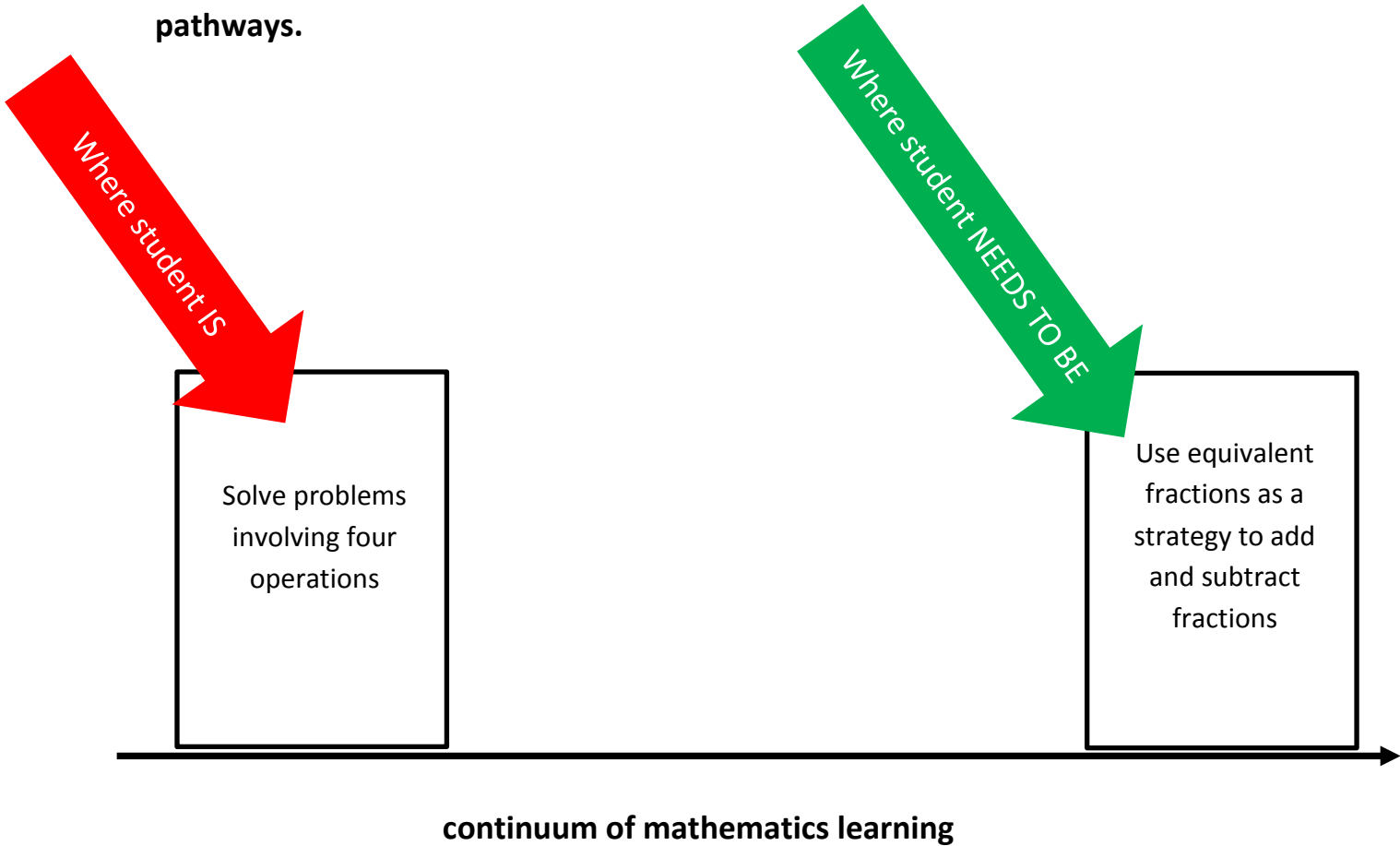
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# Intensive Interventions in Mathematics

- Module 1
  - Part 2
  - Activity #4
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Determine the foundational skills that may need to be included within intensive intervention. You can use your state standards or your knowledge of mathematical pathways.




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# Intensive Interventions in Mathematics




- Module 1
- Part 3
- Activity #5



Look at this set of word problems used in a third-grade intervention:




**BUCCANEER PROBLEMS: LESSON 49**




A. There were 41 kids at the lunch table. Then, 9 kids got up to buy milk and 13 kids cleared their trays. How many kids are at the table now?

B. Marta planted 34 lettuce plants in her garden. Then, she planted 13 more lettuce plants. One night a rabbit ate 22 of her lettuce plants. How many lettuce plants does Marta have left?

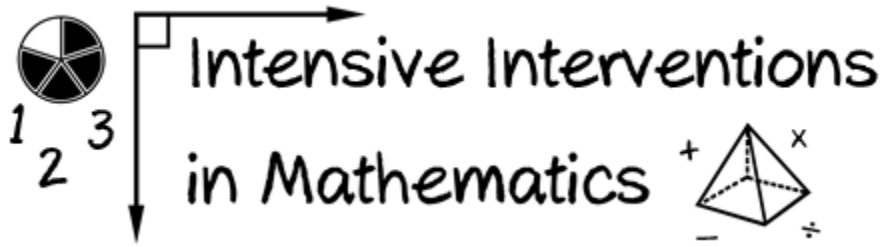
C.

Toy Prices	
Video	
Blocks	
Doll House	

Each  stands for \$5.

Carrie had \$20 in her piggy bank. Her grandma gave her \$20 for her birthday. Then, she bought blocks. How much money does Carrie have now?

1. What **foundational skills** do students need to know to successfully solve such problems?
2. What **types of assessments** would you use to design the mathematical content for intensive intervention?



# Intensive Interventions in Mathematics

- Module 1
- Part 3
- Activity #6



Here's a list of a student's strengths and weaknesses.

## Strengths:

- Addition and subtraction of whole numbers with regrouping
- Multiplication by single-digit multiplier/ division by a single-digit divisor
- Comparing whole numbers
- Interpreting graphs, tables, and charts
- Addition and subtraction of fractions with like denominators
- Multiplication of fractions
- Problem solving – single-step problems using whole number operations

## Weaknesses:

- Adding and subtracting fractions with unlike denominators
- Dividing, simplifying, and comparing fractions
- Multiplication by double-digit multiplier/ division by a double-digit divisor
- Addition, subtraction, multiplication, and division of decimals
- Comparing decimals
- Problem-solving – multi-step word problems and problems using rational numbers

1. What mathematical content is important for this student in terms of intensive intervention?

2. What foundational skills might be a part of intensive intervention?

3. How might some of those things need to be retaught?



With your coach: Identify and map the foundational mathematics skills that you may include within intensive intervention.

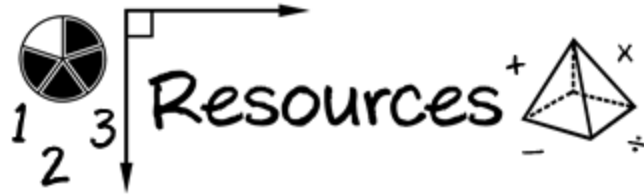
- Consider the following:
  - the grade level(s) you teach
  - your state’s core standards
  - your students’ present skill levels
  - appropriate sequencing of skills

Student(s)	Current Level	Skills to Teach/Reteach	Standard to Meet



Module 1  
(cont.)

Student(s)	Current Level	Skills to Teach/Reteach	Standard to Meet



**Common Core State Standards for Mathematics:**

[http://www.corestandards.org/wp-content/uploads/Math\\_Standards1.pdf](http://www.corestandards.org/wp-content/uploads/Math_Standards1.pdf)

Scroll down in yellow column to the right, **Standards by Domain** shows strands vertically aligned by grade level.

A state-specific example: **Texas Essential Knowledge and Skills – Vertical Alignment Documents:**

<http://tea.texas.gov/student.assessment/special-ed/taaralt/vertalign/>

In center of page, select **Mathematics**.

The standards your state uses:

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