ADDING FRACTIONS

Special Ed

ALSO INCLUDES GOOGLE SLIDES

This unit was created with this guy in mind. He has autism and an intellectual disability. He is a non-reader and lacks many pre-requisite math skills needed for math. With some support, he is able to do this unit and enjoys the challenge. He is my tester!!

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In a separate files:

- Lesson plans
- Directions and links to digital version of the activities

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This unit contains over 100 pages of material. But, don't worry!! I have included a 15 day lesson plan to help you make the most of everything packed in this unit.

Adding Fractions Lesson Plan

Preparation

- Print out a vocabulary board for each student to use throughout unit
  - Laminate or place in page protector
- Vocabulary cards
  - Print out a set of cards for each student onto cardstock and laminate
  - Used for daily activities
- Book
  - Print out, laminate, and bind
  - OR your students can listen to the pre-recorded version
  - I highly recommend using the movie version of the book (see direction for digital activities for link) since it is animated and narrated
- Fraction cards
  - Print out a set of fraction cards onto cardstock and laminate

Preassessment (do day 1 before starting lesson)

- Use the quiz as the preassessment
- I cannot emphasize enough how important this step is. If you want to see growth, this preassessment is so important!!

Teaching Tips

1. *Color Coding*: this is a really easy way to add more structure to a matching activity. Outline or color in an empty box or sorting label. Outline or color in the corresponding picture symbols the same colors. Becomes a color matching task.
   a. For more info, read more here: https://specialneedsforspecialkids.org/2015/09/05/using-color-coding-for-differentiation/
   b. I also have a blog post on differentiating one activity 3 ways: https://specialneedsforspecialkids.org/2018/10/22/differentiating-1-activity-3-ways-easily-and-effectively/
2. *Make you own copies of the activities*: Every day I review the activity we did yesterday. For that reason:
   a. I often complete the activity myself and often laminated it for easy review that I could use year after year.

The lesson plans contain:

Overall tips for teaching students with significant needs and who may lack some pre-requisite skills.

Quick Look

Day	Activity	Day	Activity
1	• Book • Vocabulary cards intro • Power card introduction • Sorting activity	9	• Book • Vocabulary activity • Simplifying fractions
2	• Book • Vocabulary activity • Review power card • Sorting activity	10	• Book • Vocabulary activity • Simplifying fractions
3	• Book • Vocabulary activity • Review power card • Finding LCD	11	• Book • Vocabulary cut and paste • Adding fractions
4	• Book • Vocabulary activity • Review power card • Finding LCD	12	• Book • Vocabulary cut and paste • Adding fractions
5	• Book • Vocabulary activity • Adding numerators	13	• Book • Adding fractions
6	• Book • Vocabulary activity • Adding numerators	14	• Book • Adding fractions
7	• Book • Vocabulary activity • Simplifying fractions	15	• Quiz
8	• Book • Vocabulary activity • Simplifying fractions		

The lesson plans contain:

A quick look at what you will do each day.

Day 9

Activity	Notes	Materials
Read or listen to the movie version of the book	• Read through the story, asking lots of questions • Continue to make connections between book and vocabulary board	• Book • Vocabulary board
Vocabulary cards Bean Bag Toss (10 minutes)	• Glue the cut apart symbols to the paper plates (one on each plate) • Arrange them around the room • Students toss the bean bag trying to get it to land on a paper plate • Students retrieve the paper plate and share the vocabulary card they retrieved • Note: you can mix in some fraction cards with the vocabulary cards or just play using the fraction cards	• Vocabulary cards • Optional: fraction cards • Small paper plates or pieces of construction paper • Bean bags
Simplifying fractions review (5 minutes)	• Review the worksheet completed yesterday	• Simplifying fractions worksheet

Simplifying fractions
(15 minutes)
	• Do 1-2 worksheets in set 3
	  ○ Students will fill simplify the fraction
	  ○ The last 3 practice simplifying improper fractions
	  ○ There are more worksheets in this set than you will need, so move a pace appropriate for your students
	• Allow access to and reference power card
		• Worksheet
		• Power card (simplifying)

Sharing (10 minutes)	• Each student shares one of their finished worksheets with the group using the communication method of their choice	• Completed worksheets • Communication devices

The lesson plans contain:

Detailed instructions on how that day's lesson should run including group and individual activities.

Now that we know the different types of fractions, let's look at the three steps we will follow to add two or more fractions together.

1. Find a common denominator
2. Add the numerators
3. Simplify if needed

Step 3

A fraction is in its simplest form when:

1. There is no whole number that the numerator and denominator can be divided by evenly.
2. It is a proper fraction.

$\frac{5}{6}$

There is no number other than 1 than both 5 and 6 can be divided by. ✓

It is a proper fraction. ✓

$\frac{5}{6}$ is in the simplest form.

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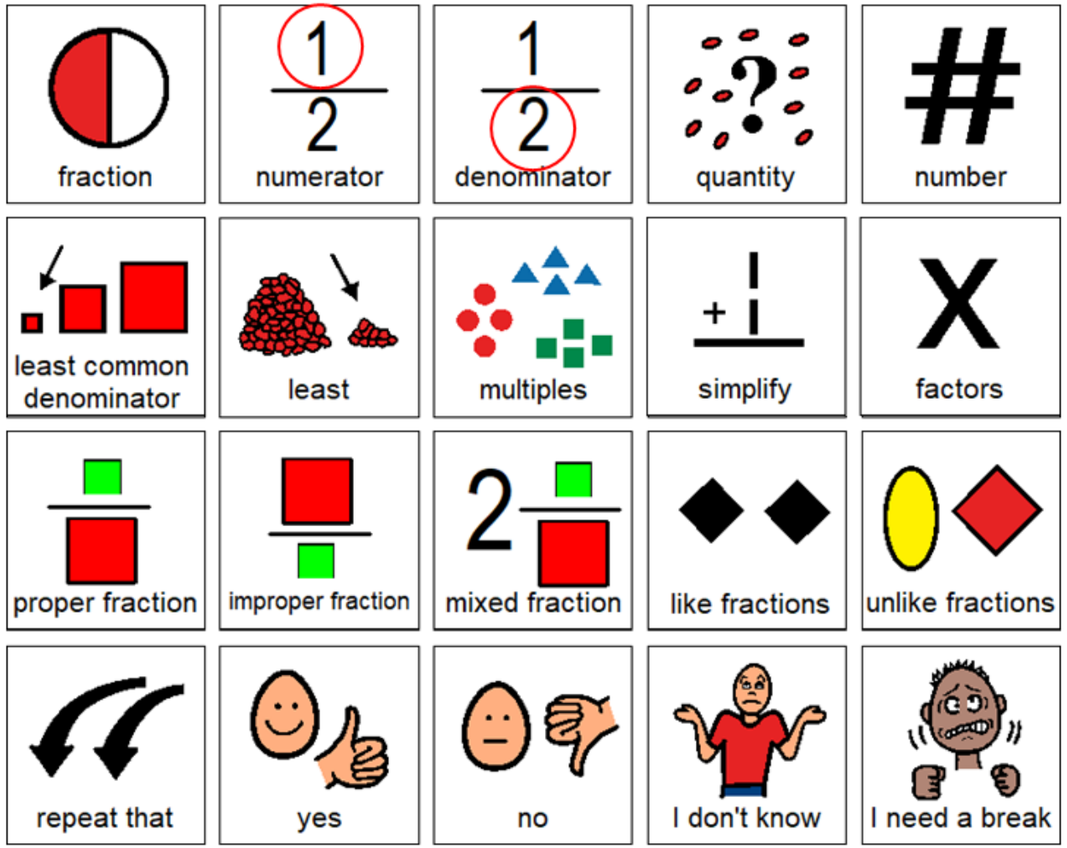
This unit contains a book that is 34 pages and covers the steps of adding fractions with and without common denominators as well as simplifying your answer.
It comes in a pdf version as well as an mp4 version that is animated and narrated.



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This unit comes with a vocabulary board.

Vocabulary boards are great for ALL students to assist with participation and engagement in group discussions.

Tips on how to use in the unit!!

numerator

The number on top of a fraction.

$\frac{1}{4}$

denominator

The number on the bottom of a fraction.

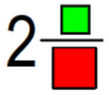
$\frac{1}{4}$

improper fraction

When the numerator is larger than the denominator.

mixed number

Number made up of a whole number and a fraction.



multiples

All the products when numbers are multiplied by the numerator.

$2 \times 3 = 6$

factors

All the numbers multiplied by another number to get the numerator or denominator

$2 \times 3 = 6$

simplified

When the fraction is a proper fraction with no common factors between the numerator and denominator.

greatest common factor

Largest factor the numerator and denominator have in common.

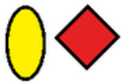
GCF

like fractions

Fractions with the same denominator.

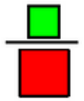
unlike fractions

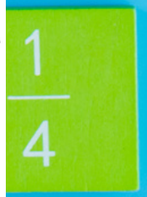
Fractions with different denominators.



proper fraction

Fraction where the numerator is smaller than the denominator.





There are 11 vocabulary cards that come in color and black and white.

Included are suggestions for group activities to do with these each day.

numerator

The number on top of a fraction.

denominator

The number on the bottom of a fraction.

multiples

All the products when numbers are multiplied by the numerator.

factors

All the numbers multiplied by another number to get the numerator or denominator

greatest common factor

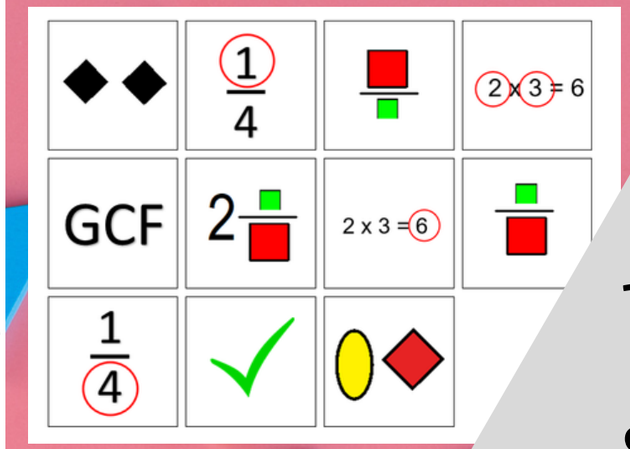
GCF

like fractions

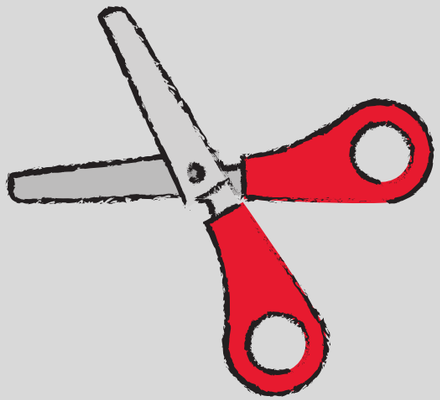
unlike fractions

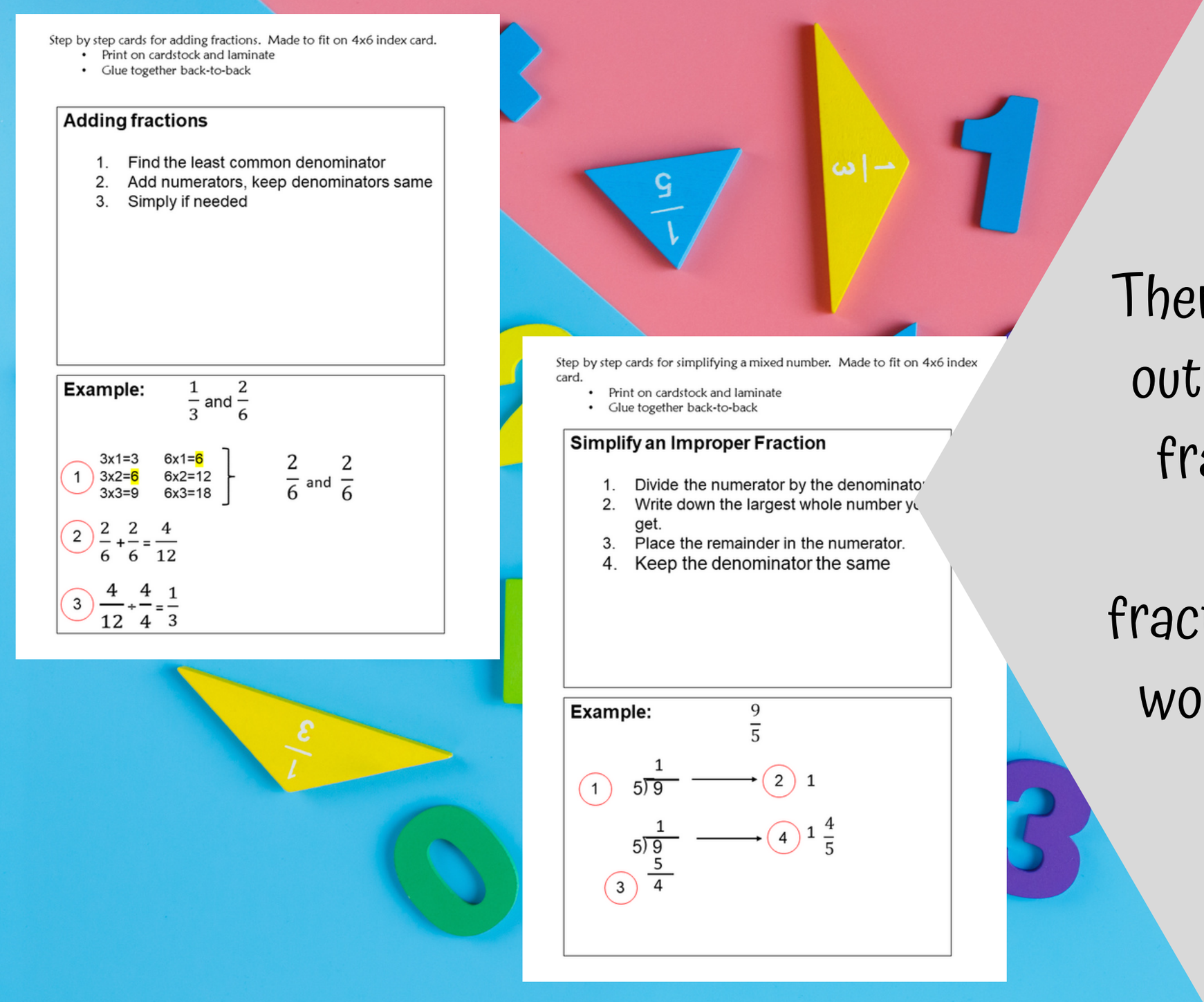
proper fraction

	The number on the bottom of a fraction.
	Number made up of a whole number and a fraction.
are	Fractions with different denominators.



There is an activity where students will match either the picture to the definition or the definition to the picture (harder).





There are 2 power cards that outline the steps for adding fractions and one for the steps on simplifying fractions. They can use when working through problems.

$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$
$\frac{1}{5}$	$\frac{1}{6}$	$\frac{1}{7}$
$\frac{1}{8}$	$\frac{1}{9}$	$\frac{1}{10}$
$\frac{2}{3}$	$\frac{2}{4}$	$\frac{3}{4}$
$\frac{2}{5}$	$\frac{3}{5}$	$\frac{4}{5}$
$\frac{2}{6}$	$\frac{3}{6}$	$\frac{4}{6}$
$\frac{5}{6}$	$\frac{2}{7}$	$\frac{3}{7}$
$\frac{4}{7}$	$\frac{5}{7}$	$\frac{6}{7}$

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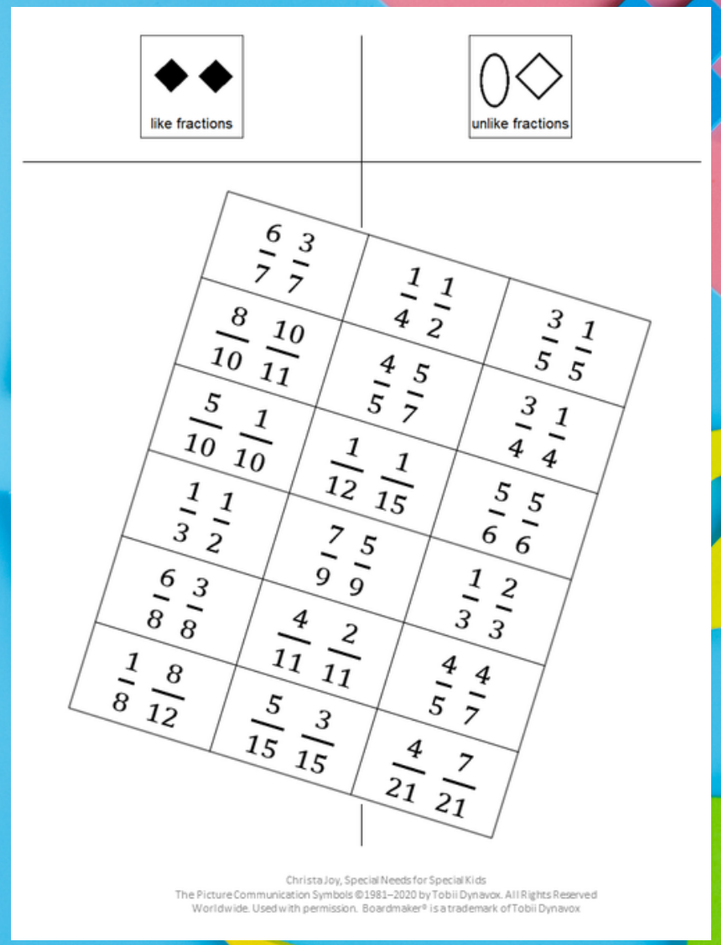
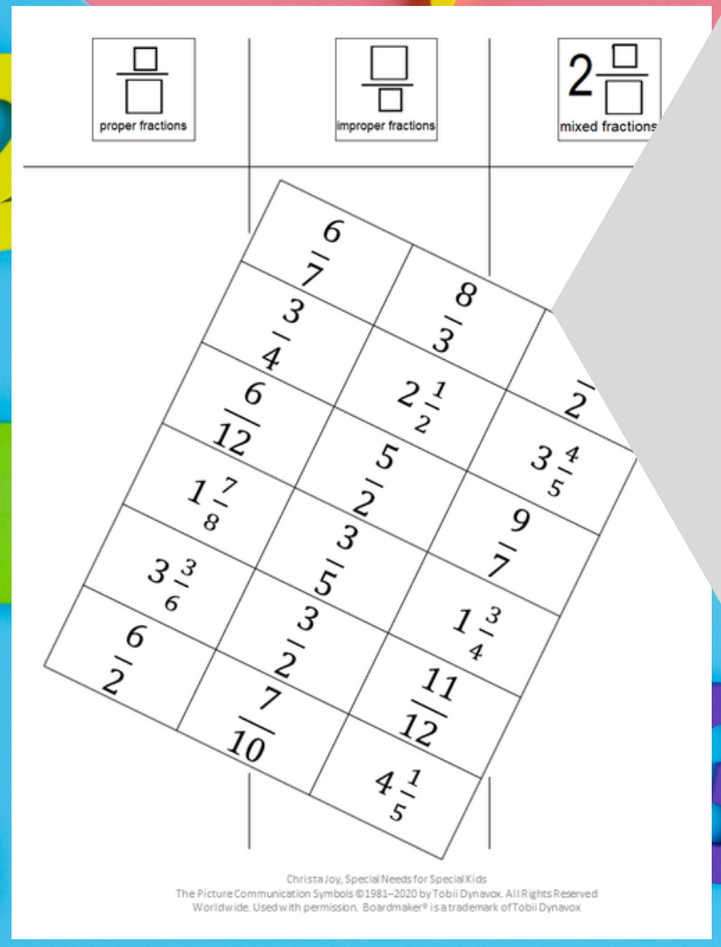
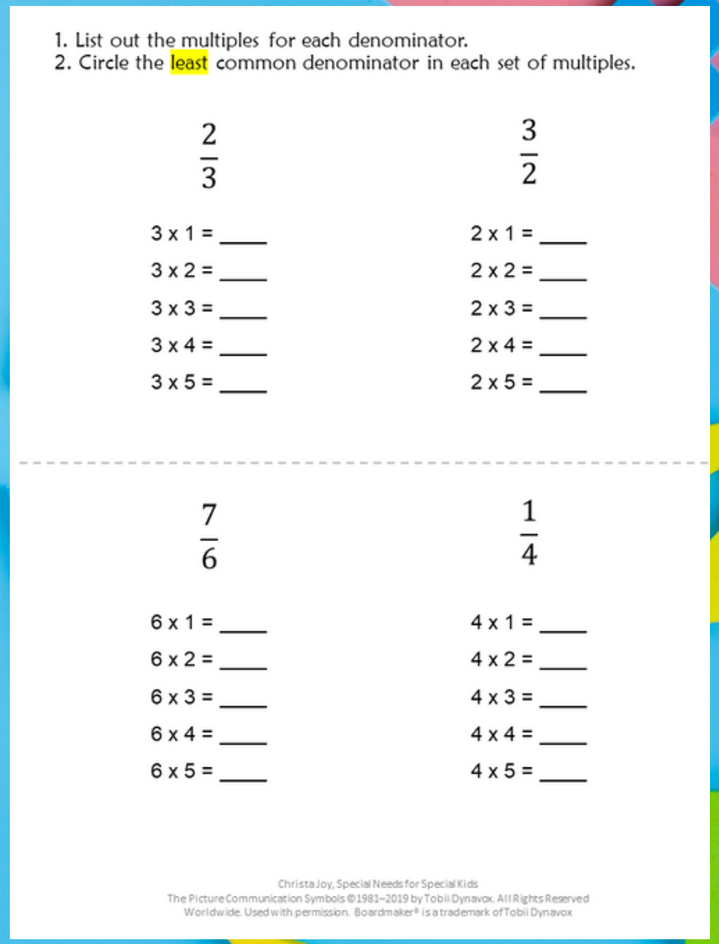
There are a set of fraction cards used for group activities and extra practice.





There are 2 sorting activities. Suggestions for differentiation are included.



1. List out the multiples for each denominator.
2. Circle the least common denominator in each set of multiples.

$\frac{2}{3}$

3 x 1 = ____
3 x 2 = ____
3 x 3 = ____
3 x 4 = ____
3 x 5 = ____

$\frac{3}{2}$

2 x 1 = ____
2 x 2 = ____
2 x 3 = ____
2 x 4 = ____
2 x 5 = ____

$\frac{7}{6}$

6 x 1 = ____
6 x 2 = ____
6 x 3 = ____
6 x 4 = ____
6 x 5 = ____

$\frac{1}{4}$

4 x 1 = ____
4 x 2 = ____
4 x 3 = ____
4 x 4 = ____
4 x 5 = ____

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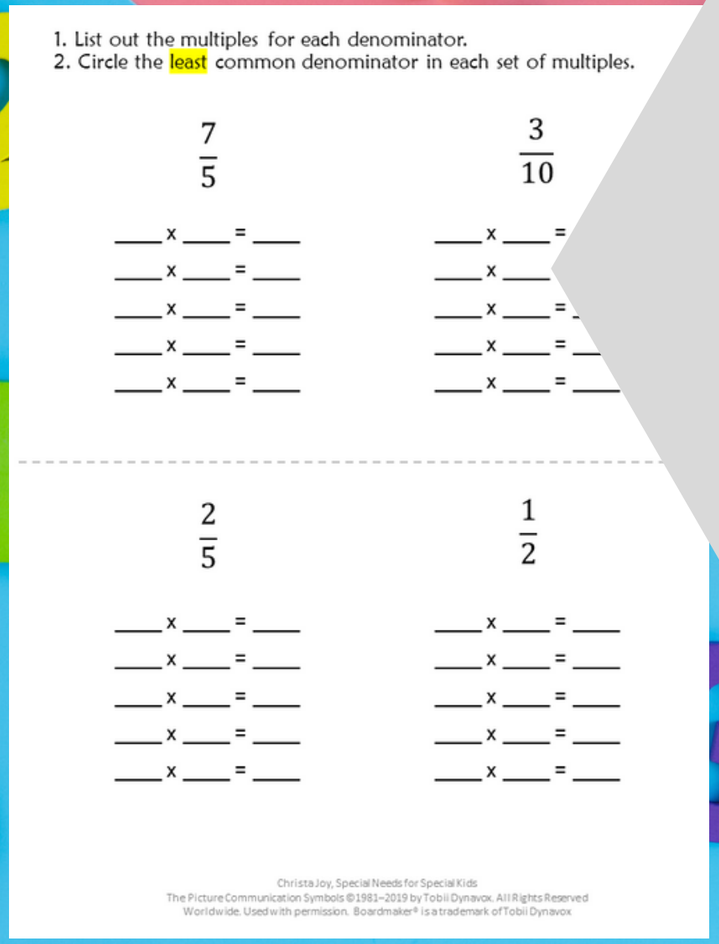

1. List out the multiples for each denominator.
2. Circle the least common denominator in each set of multiples.

$\frac{7}{5}$

____ x ____ = ____
____ x ____ = ____
____ x ____ = ____
____ x ____ = ____
____ x ____ = ____

$\frac{3}{10}$

____ x ____ =
____ x ____
____ x ____ =
____ x ____ =
____ x ____ = ____

$\frac{2}{5}$

____ x ____ = ____
____ x ____ = ____
____ x ____ = ____
____ x ____ = ____
____ x ____ = ____

$\frac{1}{2}$

____ x ____ = ____
____ x ____ = ____
____ x ____ = ____
____ x ____ = ____
____ x ____ = ____

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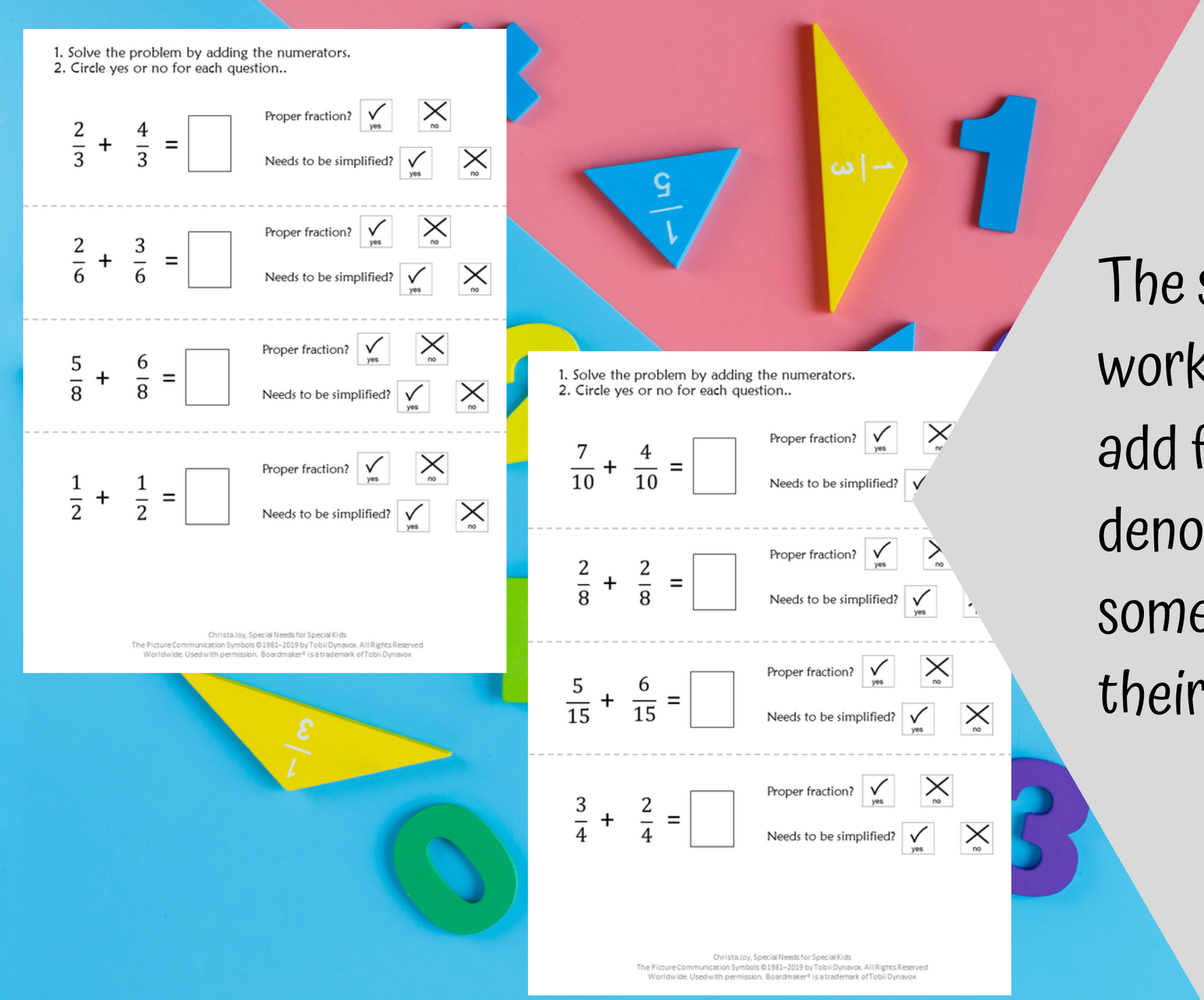
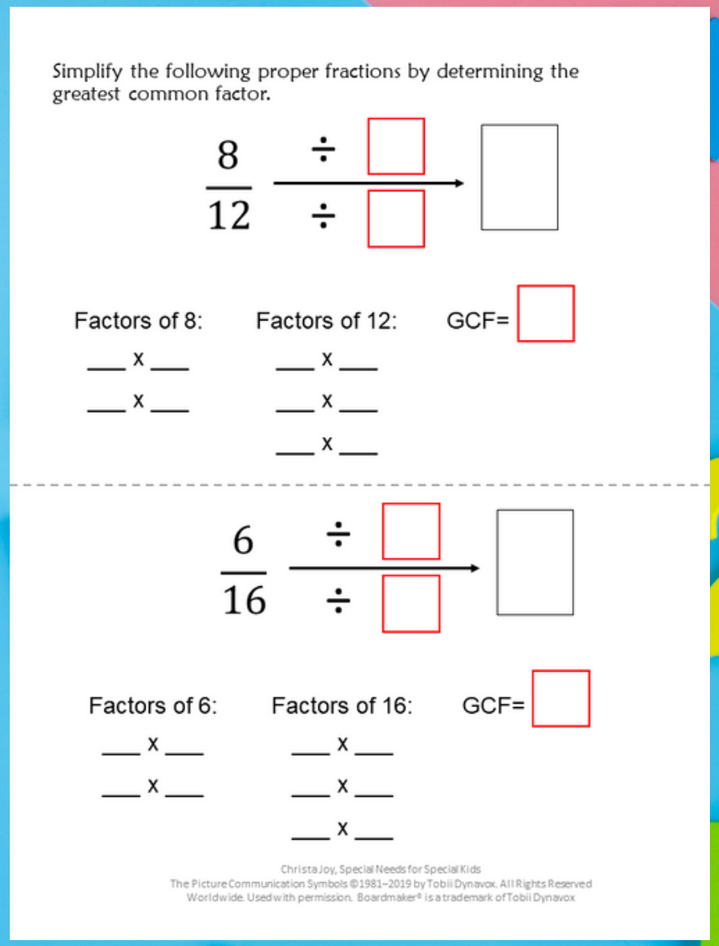
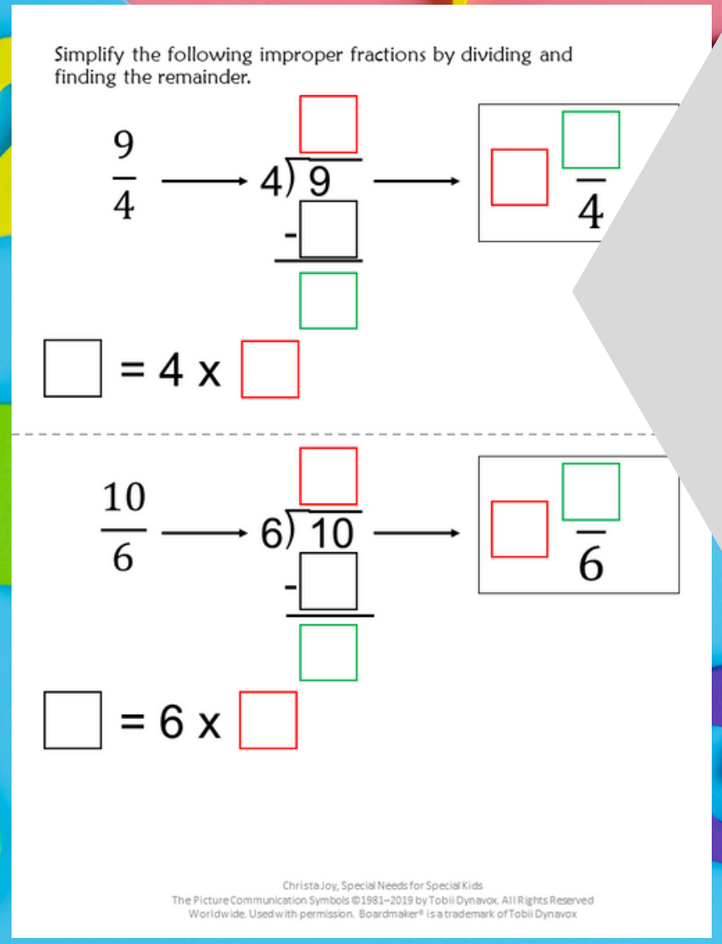
There are 4 worksheet sets that practice a specific step in the process of adding fractions.

This is set 1 and has 3 worksheets where students find the LCD by listing the multiples.

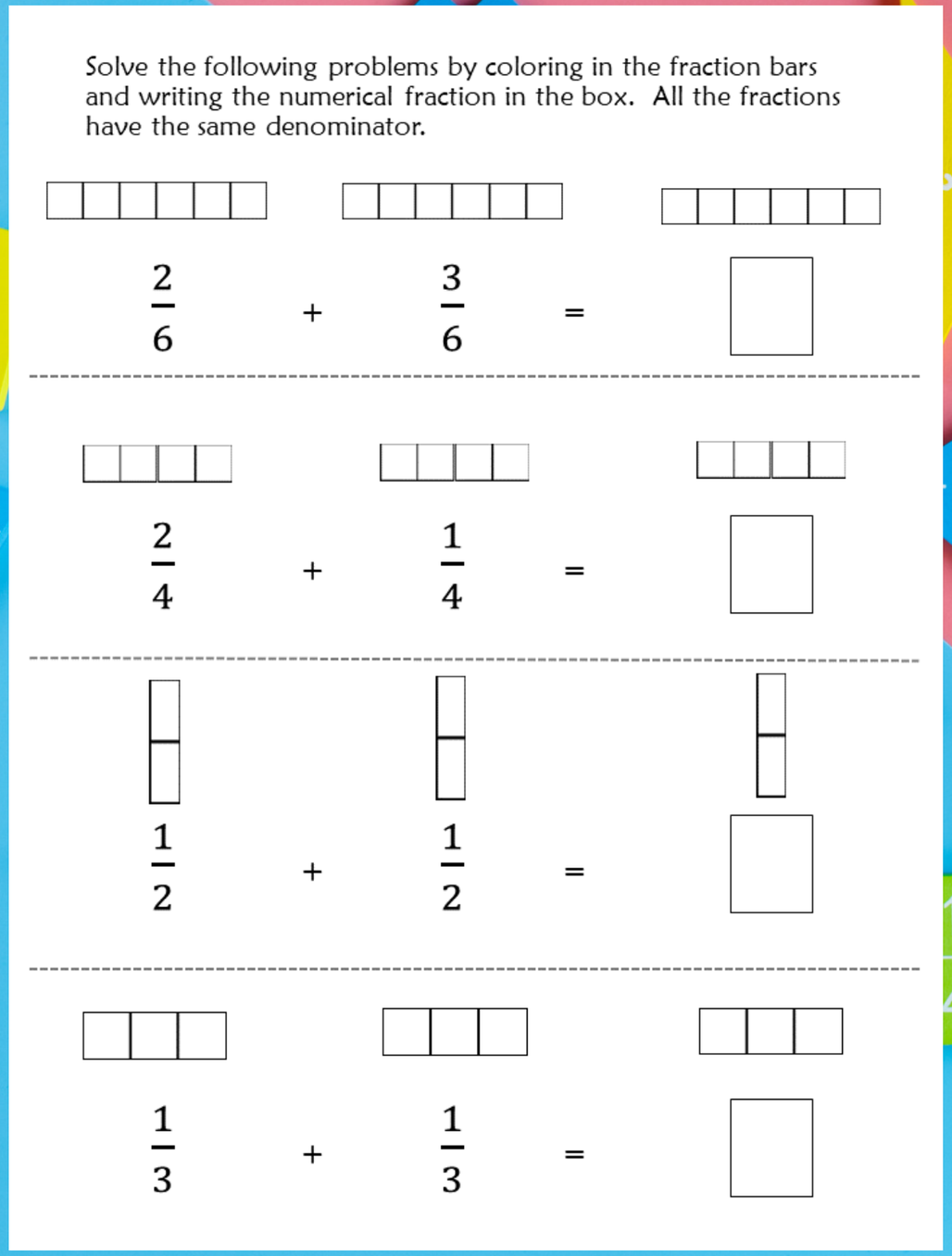


The second set has 3 worksheets, and students add fractions with like denominators and answer some simple questions about their answer.

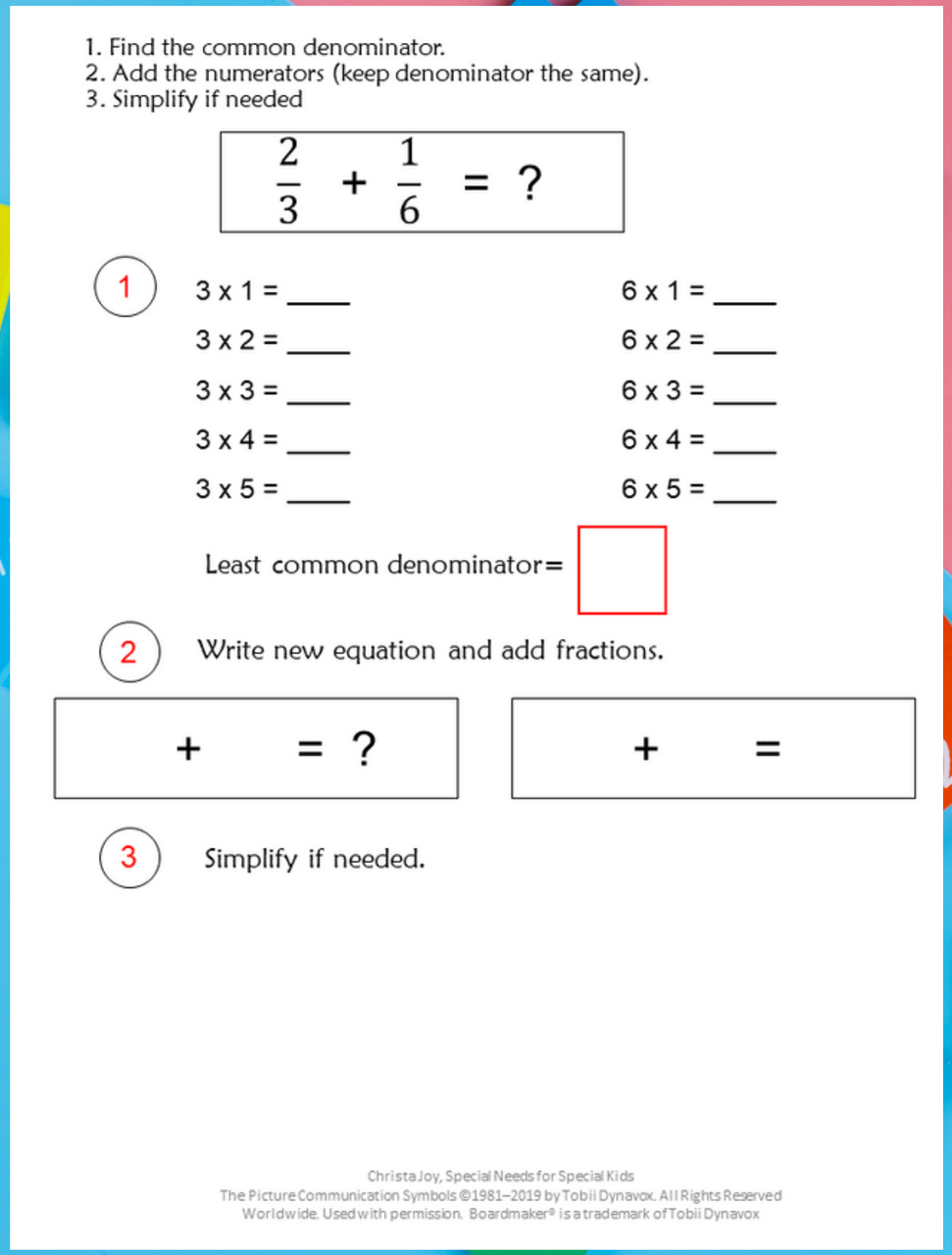




The third set has 7 worksheets to practice simplifying fractions by finding the greatest common factor. There are 3 that have students simplify proper fractions, and 4 worksheets use improper fractions. There is color-coding present to help support students through the process.



The fourth set has 10 worksheets to practice actually adding fractions. The first two worksheets have students add fractions with like denominators and color in the fraction bars.



1. Find the common denominator.
2. Add the numerators (keep denominator the same).
3. Simplify if needed

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

1

3 x 1 = ____	6 x 1 = ____
3 x 2 = ____	6 x 2 = ____
3 x 3 = ____	6 x 3 = ____
3 x 4 = ____	6 x 4 = ____
3 x 5 = ____	6 x 5 = ____

Least common denominator=

2 Write new equation and add fractions.

+ = ?

+ =

3 Simplify if needed.

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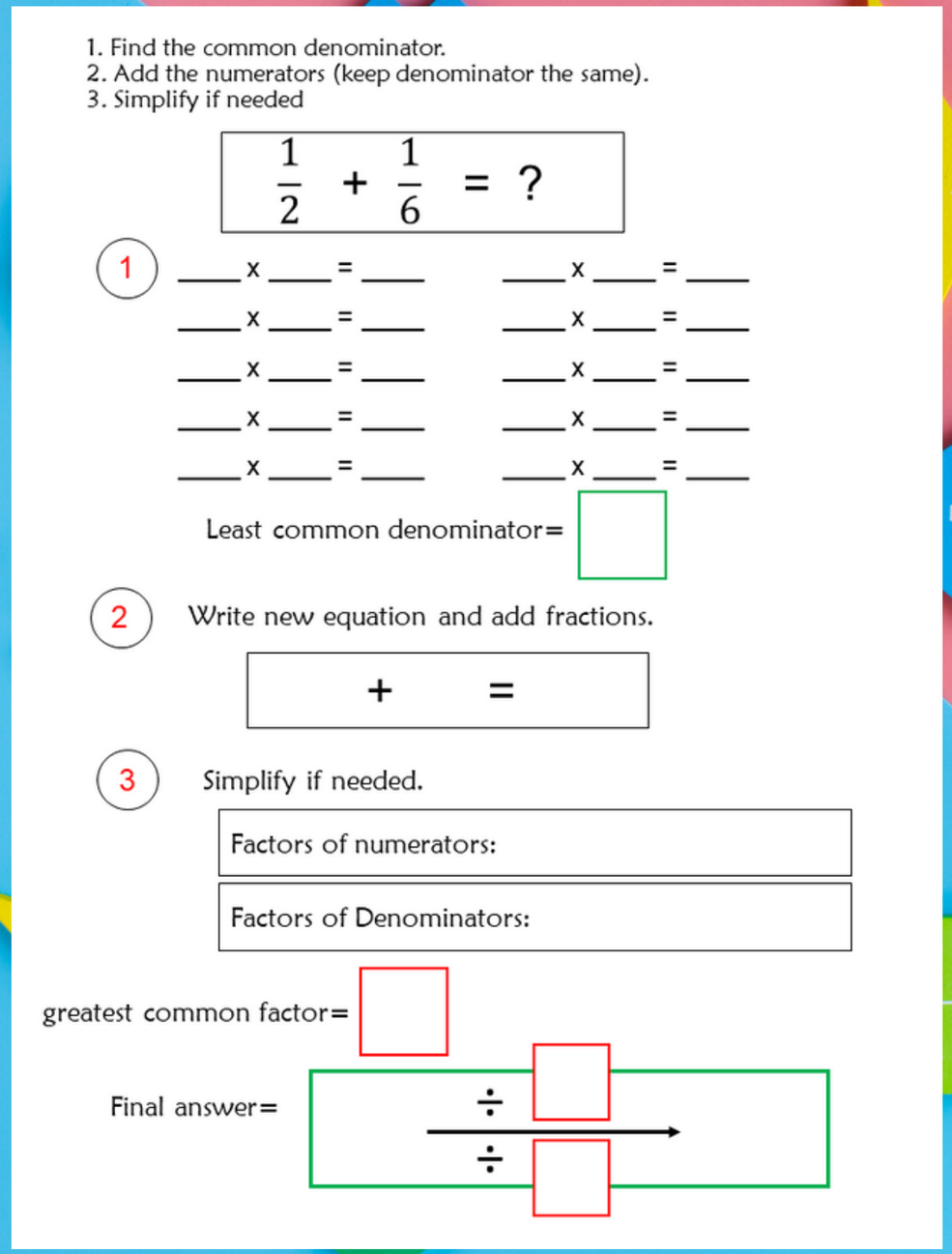
The next two worksheets have students add fractions with unlike denominators but do NOT need to be simplified.



1. Find the common denominator.
2. Add the numerators (keep denominator the same).
3. Simplify if needed

$$\frac{1}{2} + \frac{1}{6} = ?$$

1

____ x ____ = ____ ____ x ____ = ____

____ x ____ = ____ ____ x ____ = ____

____ x ____ = ____ ____ x ____ = ____

____ x ____ = ____ ____ x ____ = ____

____ x ____ = ____ ____ x ____ = ____

Least common denominator=

2 Write new equation and add fractions.

____ + ____ = ____

3 Simplify if needed.

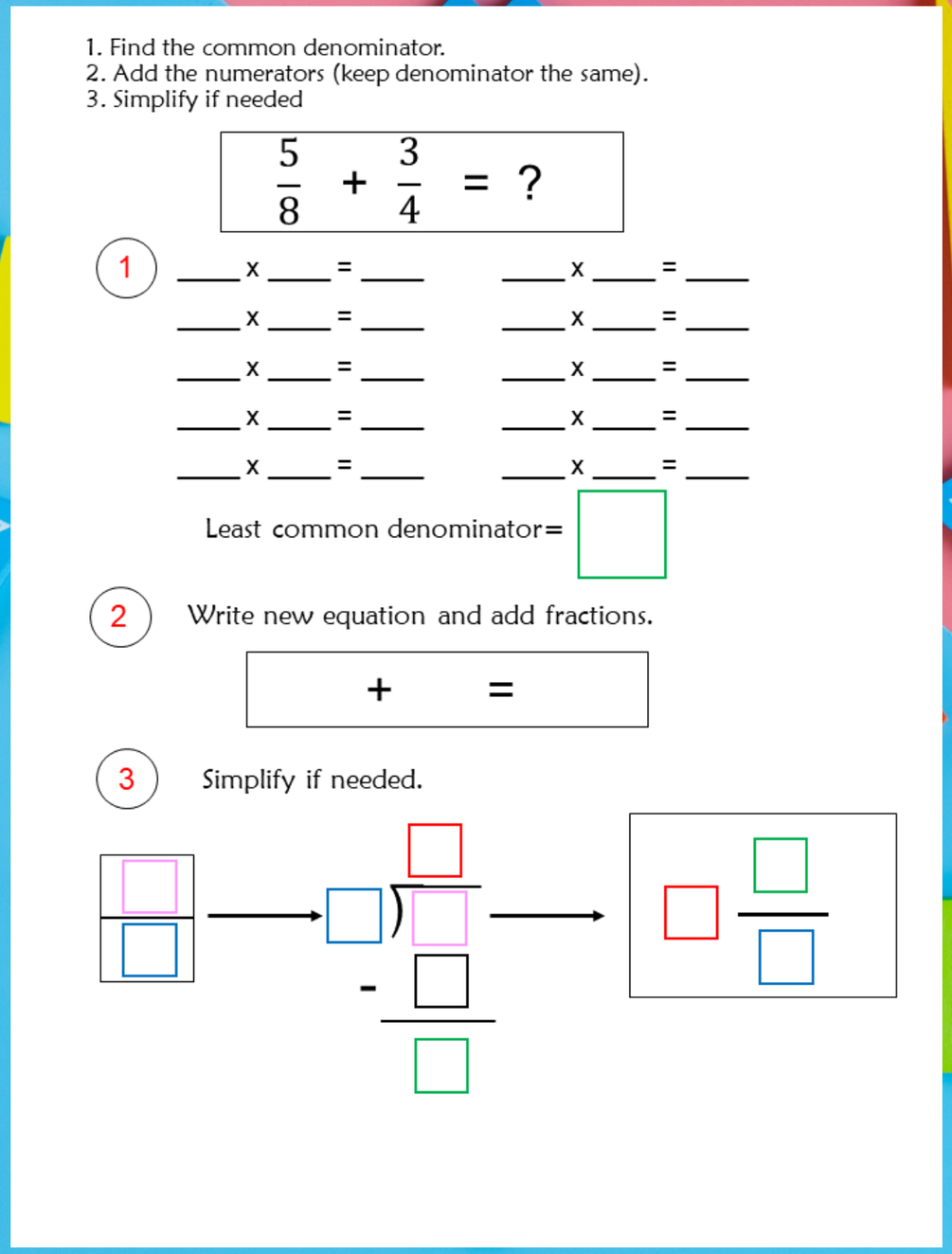
Factors of numerators:

Factors of Denominators:

greatest common factor=

Final answer= ÷ ÷

The next three worksheets have students add fractions with unlike denominators and have PROPER fractions that need to be simplified. Again, there is color-coding to help support students throught the process.


1. Find the common denominator.
2. Add the numerators (keep denominator the same).
3. Simplify if needed

$$\frac{5}{8} + \frac{3}{4} = ?$$

1 ____ x ____ = ____ ____ x ____ = ____

____ x ____ = ____ ____ x ____ = ____

____ x ____ = ____ ____ x ____ = ____

____ x ____ = ____ ____ x ____ = ____

____ x ____ = ____ ____ x ____ = ____

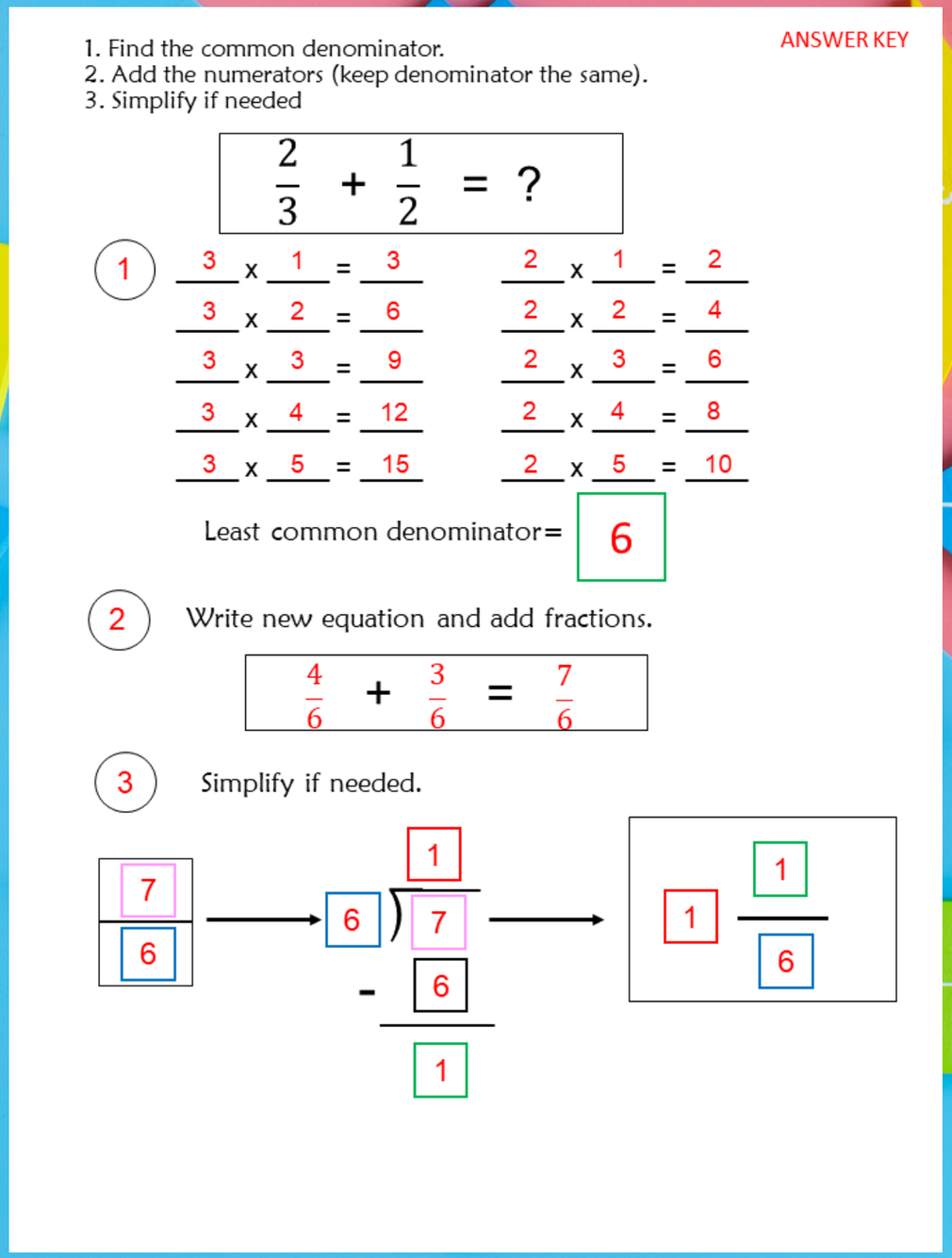
Least common denominator=

2 Write new equation and add fractions.

+ =

3 Simplify if needed.

The last three worksheets have students add fractions with unlike denominators and have IMPROPER fractions that need to be simplified. Again, there is color-coding to help support students throught the process.



ANSWER KEY

1. Find the common denominator.
2. Add the numerators (keep denominator the same).
3. Simplify if needed

$$\frac{2}{3} + \frac{1}{2} = ?$$

1

3 x 1 = 3	2 x 1 = 2
3 x 2 = 6	2 x 2 = 4
3 x 3 = 9	2 x 3 = 6
3 x 4 = 12	2 x 4 = 8
3 x 5 = 15	2 x 5 = 10

Least common denominator = 6

2 Write new equation and add fractions.

$$\frac{4}{6} + \frac{3}{6} = \frac{7}{6}$$

3 Simplify if needed.

$$\frac{7}{6} \longrightarrow \begin{array}{r} 1 \\ 6\,\overline{)\,7} \\ -\ 6 \\ \hline 1 \end{array} \longrightarrow 1\,\frac{1}{6}$$

All worksheets have detailed answer keys.

Name: _____ Quiz

1. Circle the fractions below that are proper fractions:

$\frac{3}{5}$ $\frac{7}{10}$ $\frac{6}{5}$ $\frac{8}{6}$ $\frac{3}{2}$ $\frac{6}{4}$ $\frac{2}{5}$ $\frac{8}{12}$

2. In order to add fractions, what needs to be the same?

3. Circle the fractions that need to be simplified.

$\frac{3}{5}$ $\frac{6}{12}$ $\frac{5}{2}$ $\frac{2}{6}$ $\frac{8}{12}$

4. What is the greatest common factor for 4 and 6?

2	4	12

5. What is the greatest common factor for 9 and 24?

9	3	12

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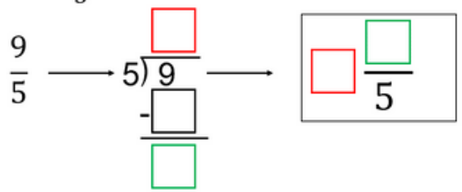
6. Add the following fractions:

$\frac{2}{5} + \frac{1}{5} = \square$

7. Simplify $\frac{9}{5}$:



8. Solve the equation below. Show your work.

$\frac{1}{3} + \frac{1}{2} = ?$

9. Solve the equation below. Show your work.

$\frac{2}{8} + \frac{1}{2} = ?$

10. Solve the equation below. Show your work.

$\frac{1}{3} + \frac{7}{9} = ?$

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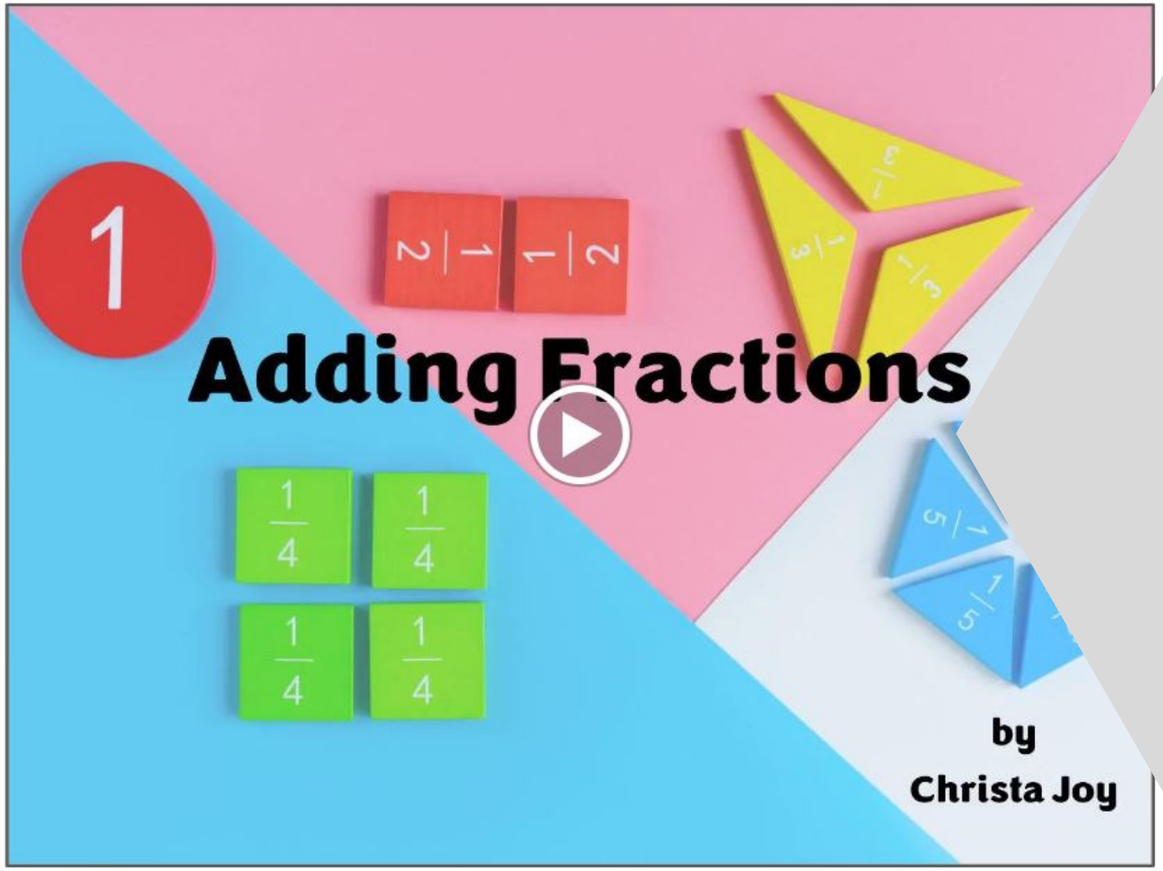
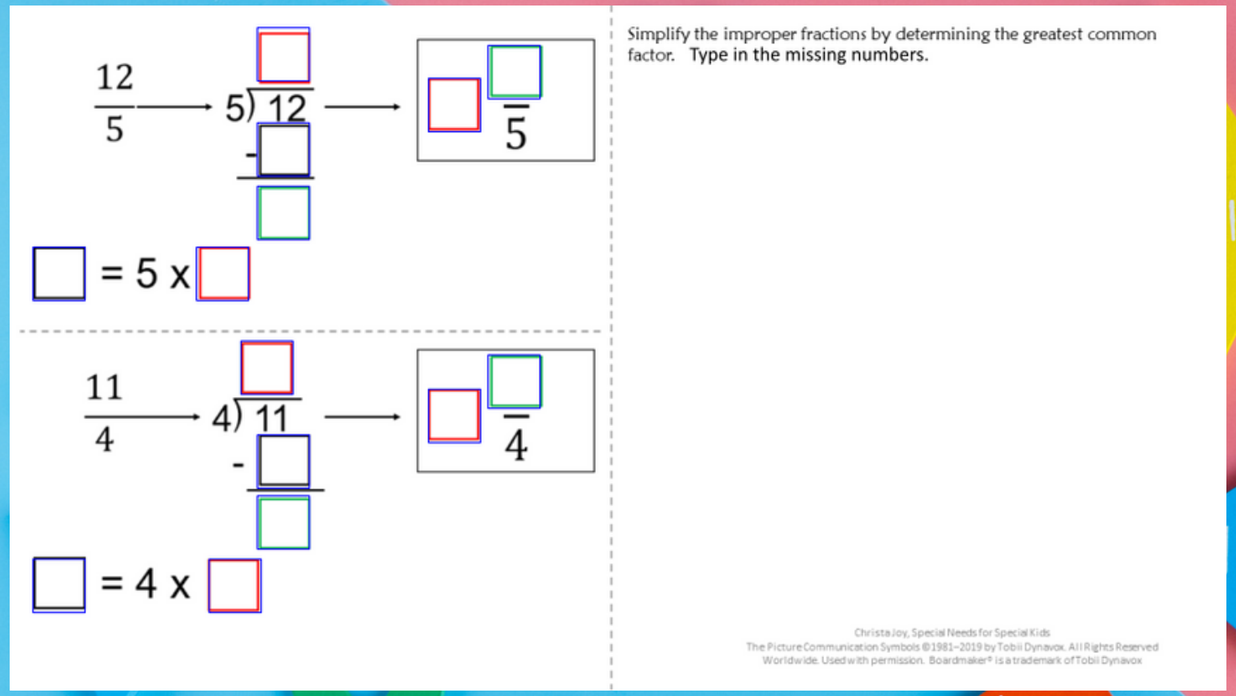
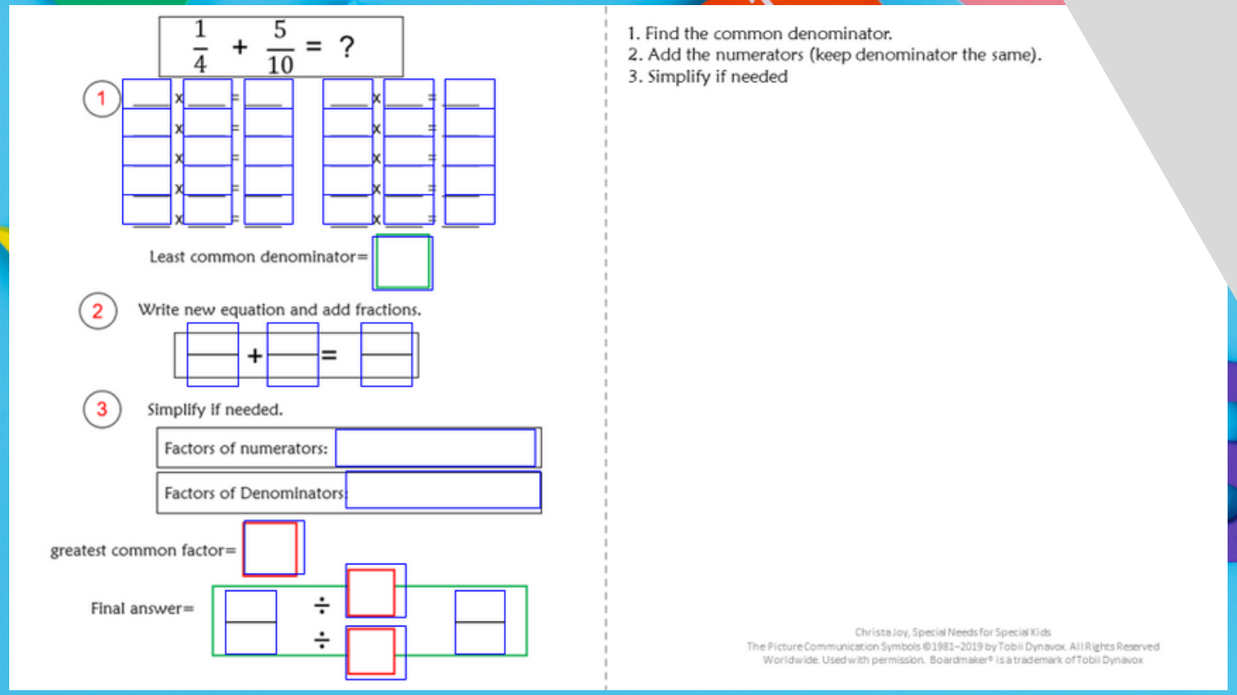
There is a short quiz to use as the assessment.

Watch the movie on Adding Fractions

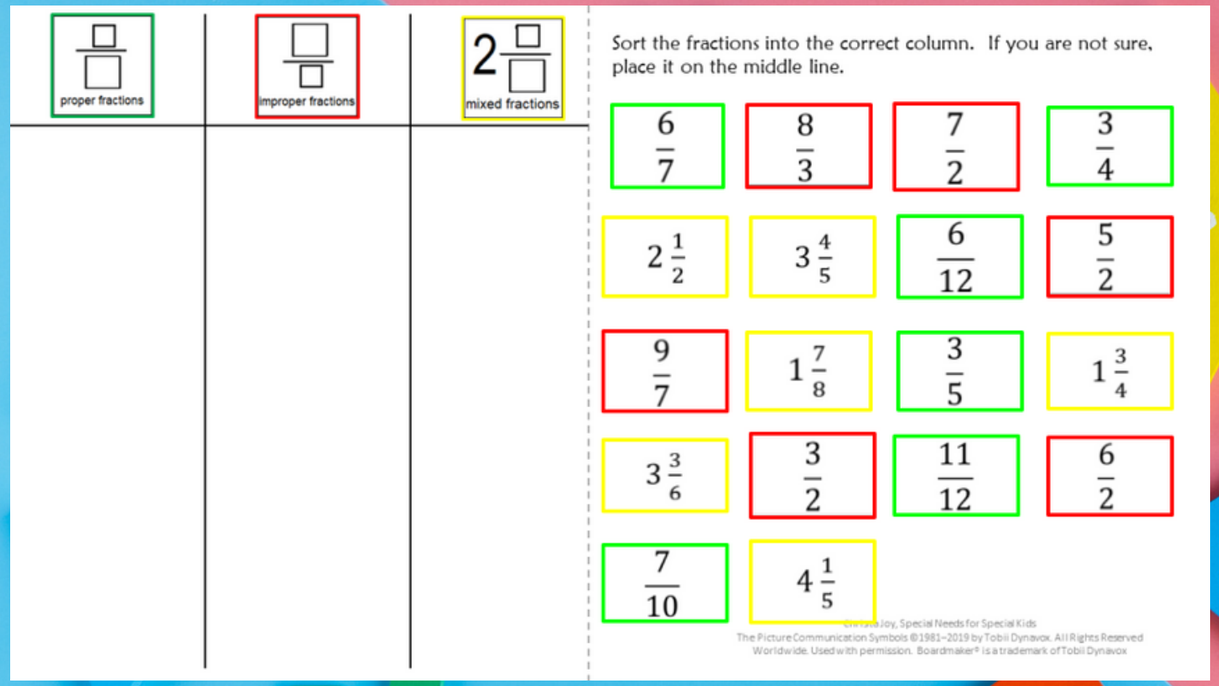


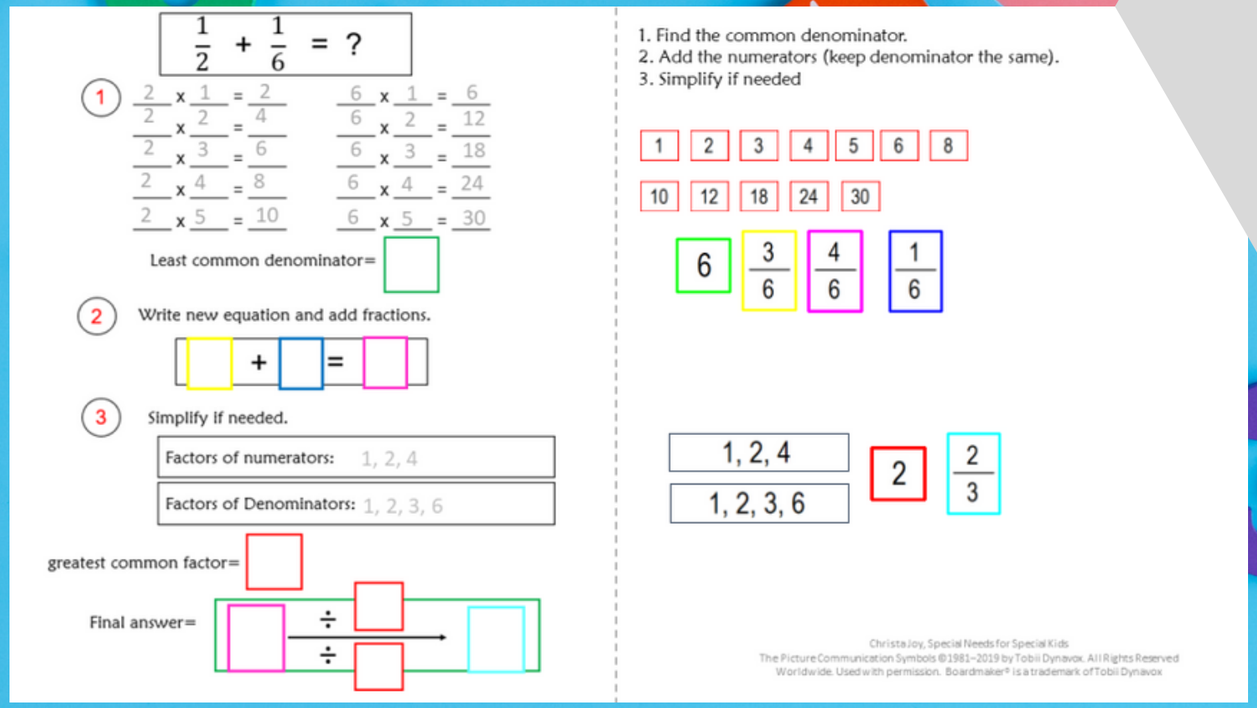
This unit includes digital activities. Part of that is a movie version of the book you can play in a google slide. This movie is animated and narrated.





There are 2 sets of google slides that include a set where students can type in the answers.





These make a great independent learning center.

One set is differentiated with color and click and drag numbers for students who need more support. In this set, students are NOT typing but clicking and dragging over their answers.

I realize there will be some students out there unable to do cutting activities. I have a blog post with ways to complete activities without a pair of scissors!!

Click Here to read more!!