

# Lesson Plan Template

Date: \_\_\_\_\_

<b>Grade:6</b>	<b>Subject: Math</b>
<b>Materials: Pencil, Paper</b>	<b>Technology Needed: Power Point, Computer, Projector</b>
<b>Instructional Strategies:</b> <input type="checkbox"/> Direct instruction <input type="checkbox"/> Peer teaching/collaboration/cooperative learning <input type="checkbox"/> Guided practice <input type="checkbox"/> Visuals/Graphic organizers <input type="checkbox"/> Socratic Seminar <input type="checkbox"/> PBL <input type="checkbox"/> Learning Centers <input type="checkbox"/> Discussion/Debate <input type="checkbox"/> Lecture <input type="checkbox"/> Technology integration <input type="checkbox"/> Modeling <input type="checkbox"/> Other (list)	<b>Guided Practices and Concrete Application:</b> <input type="checkbox"/> Large group activity <input type="checkbox"/> Hands-on <input type="checkbox"/> Independent activity <input type="checkbox"/> Technology integration <input type="checkbox"/> Pairing/collaboration <input type="checkbox"/> Imitation/Repeat/Mimic <input type="checkbox"/> Simulations/Scenarios <input type="checkbox"/> Other (list) Explain:
<b>Standard(s)</b> 6.NS.1 Use visual fraction models and equations to interpret and compute quotients of fractions. Use models and equations to solve word problems involving division of fractions by fractions.	<b>Differentiation</b> <b>Below Proficiency:</b> Students who are below proficient can ask questions when needed. I will provide a notes sheet where they can fill in the blank words and practice note taking. There is a worksheet if they need review before diving into the dividing mixed numbers. <b>Above Proficiency:</b> Above Proficiency students will work on their own independently and may ask questions when needed. There is a worksheet provided with next level questions. <b>Approaching/Emerging Proficiency:</b> Students will work independently and may ask questions when needed. <b>Modalities/Learning Preferences:</b> Visual, hands on, auditory
<b>Objective(s)</b> Students can divide mixed numbers. Students can divide mixed numbers and simplify.  <b>Bloom's Taxonomy Cognitive Level:</b> Solve, calculate	<b>Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)</b> Students understand their behavioral expectations.
<b>Classroom Management- (grouping(s), movement/transitions, etc.)</b> Students will transition into the activity. They can work together if they like, or they can work independently. Students know to work at a quiet respectful voice level.	<b>Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)</b> Students understand their behavioral expectations.
<b>Minutes</b>	<b>Procedures</b>
0	Set-up/Prep: Power point and work sheet done.
5	<b>Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)</b> Think about this question. If you had 4 ½ muffins and you wanted to split it among 3 of your friend. How much of the cupcakes would each friend get? What do you think we will be doing today based on that question? Let's estimate it. I know I can give each friend one whole cupcake. Then I can split the last whole cupcake into three even parts to give each of my friends 1/3 of the cupcake. So, we could estimate that each of my friends will get at least 1 1/3 cupcakes.
20-25	<b>Explain: (concepts, procedures, vocabulary, etc.)</b> Today we are going to be talking about dividing mixed numbers. We have just completed going over multiplying mixed numbers and dividing fractions. Everything we have learned in the past couple weeks carries over to what we are doing today. We are also going to be working on our note taking. Dividing fractions has a lot of steps so it is important that we know the steps and we can look back at them when we need some help. So please grab a piece of paper and a pencil. So lets look at the first step of dividing mixed numbers 1. Turn them into improper fractions. Let's look at dividing these mixed fractions. <div style="text-align: center; font-size: 1.5em; color: red;"> <math display="block">3\frac{5}{6} \div \frac{2}{3} = \frac{23}{6} \div \frac{2}{3}</math> </div> 2. Keep the first fraction the same

$$3\frac{5}{6} \div \frac{2}{3} = \frac{23}{6} \div \frac{2}{3}$$

3. Switch the division sign to multiplication

$$3\frac{5}{6} \div \frac{2}{3} = \frac{23}{6} \times \frac{2}{3}$$

4. Flip the second fraction to the reciprocal

$$3\frac{5}{6} \div \frac{2}{3} = \frac{23}{6} \times \frac{3}{2}$$

5. Simplify if possible

$$3\frac{5}{6} \div \frac{2}{3} = \frac{23}{\cancel{6}^2} \times \frac{\cancel{3}^1}{2}$$

6. Multiply across

$$3\frac{5}{6} \div \frac{2}{3} = \frac{23}{2} \times \frac{1}{2} = \frac{23}{4}$$

7. Turn into simplest form

$$3\frac{5}{6} \div \frac{2}{3} = 5\frac{3}{4}$$

8. Ask yourself does my answer make sense.

$$3\frac{5}{6} \div \frac{2}{3} \quad \text{yes}$$

Now let's look at a couple of examples and solve them by following our steps.

Example 1

$$\overset{+3}{\uparrow} \underset{\times 7}{\downarrow} 1\frac{1}{7} \div \frac{2}{3} = \frac{10}{7} \div \frac{2}{3} = \frac{\cancel{10}^5}{7} \times \frac{3}{\cancel{2}^1} = \frac{5}{7} \times \frac{3}{1} = \frac{15}{7} = 2\frac{1}{7}$$

Example 2

$$\frac{33}{6} = 5\frac{3}{6} = 5\frac{1}{2}$$

$$8\frac{1}{4} \div 1\frac{1}{2} = \frac{33}{4} \div \frac{3}{2} = \frac{33}{4} \times \frac{2}{3} = 6$$

Now I want you to try and do these ones on your own.

$$2\frac{1}{6} \div \frac{3}{4} = \frac{13}{6} \times \frac{4}{3} = \frac{26}{9} = 2\frac{8}{9}$$

$$6\frac{4}{5} \div 2\frac{1}{8} = \frac{34}{5} \div \frac{17}{8} = \frac{34}{5} \times \frac{8}{17} = \frac{16}{5} = 3\frac{1}{5}$$

Now lets looks at a word Problem.

- One serving of tortilla soup is  $1\frac{2}{3}$  cups. A restaurant cook makes 50 cups of soup. Is there enough to serve 35 people?

$$50 \div 1\frac{2}{3} = \frac{50}{1} \div \frac{5}{3} = \frac{50}{1} \times \frac{3}{5} = \frac{30}{1} = 30 \text{ servings}$$

No not enough

15-20	<p>Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)</p> <p>Students will work on the Dividing Mixed Numbers Maze. If they do Not finish, then they will bring it back and may finish the next day.</p>
2	<p>Review (wrap up and transition to next activity):</p> <p>Remind students that if they want to bring the maze home, they can finish it or they can bring it back to class the next day to work on it.</p>
<p>Formative Assessment: (linked to objectives, during learning)</p> <ul style="list-style-type: none"> <li>• Thumb up of they got the content down and understand it completely.</li> <li>• Thumbs to the side if they need more practice.</li> <li>• Thumbs down if they are completely lost.</li> </ul>	<p>Summative Assessment (linked back to objectives, END of learning)</p> <p>Quiz</p>
<p>Reflection (What went well? What did the students learn? How do you know? What changes would you make?):</p> <p>It went well. The students were engaged for most all the lesson. Every student participated in some way which was great to see. The explain part of the lesson did take more time than I initially thought but that was ok because they stayed engaged. I would have maybe made this a two-day lesson so I could have been there for more of the independent piece. I would have taken those students who needed some extra practice to the back table in a group to work on things together before being confident that they could compete problems on their own.</p>	

Sheet 2

Name: \_\_\_\_\_

# Dividing Fraction Maze

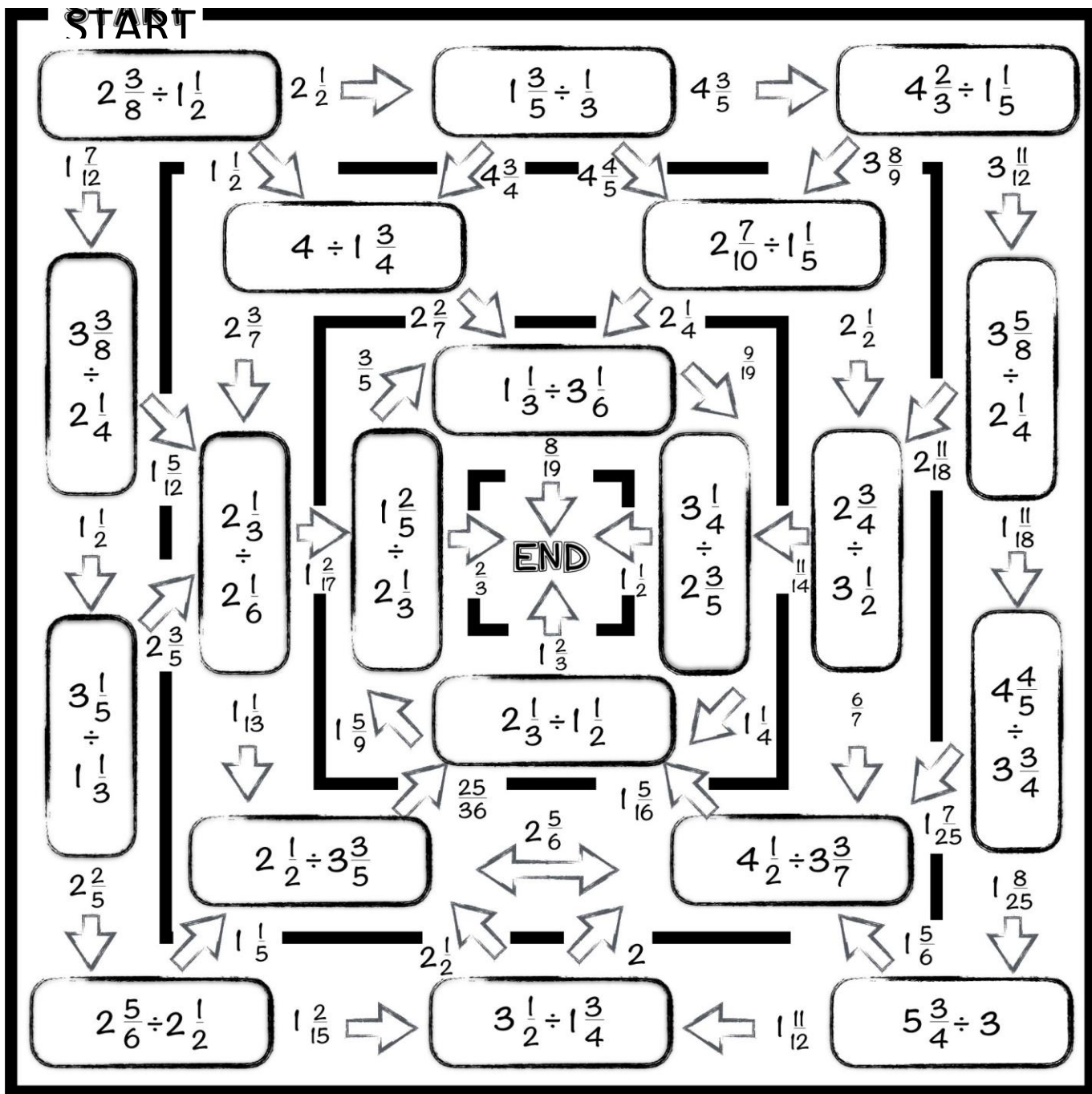
## Mixed Numbers

Begin at "Start" and find your way to the "End" by choosing the correct fraction (in simplest form).

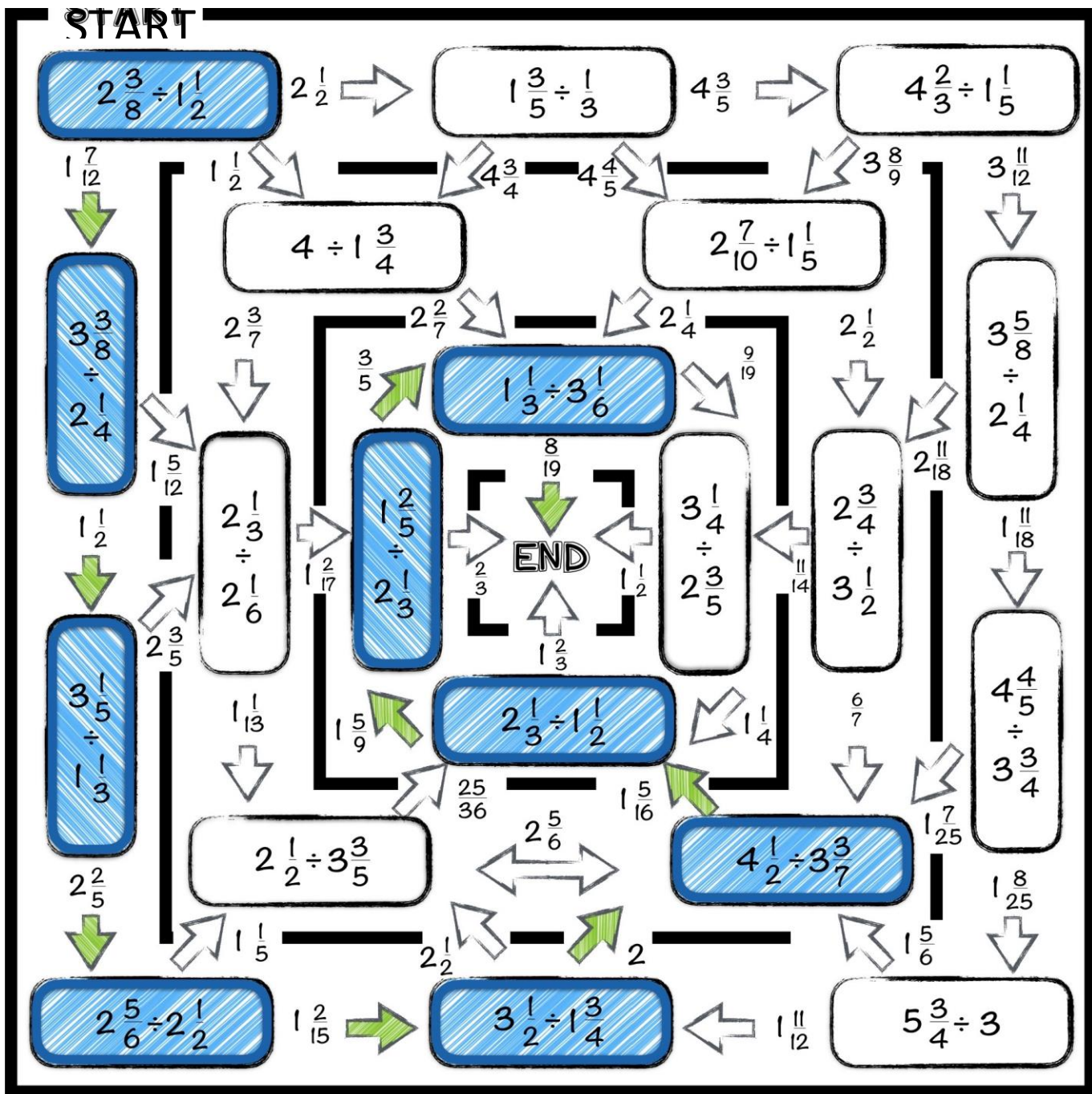
Color each box and arrow to mark your path.

**WARNING:** There are lots of paths to get to the end but only one is correct!

START



START



Notes Sheet

Name: \_\_\_\_\_

Step 1 – Turn the \_\_\_\_\_ number into an \_\_\_\_\_ fraction.

Step 2 – \_\_\_\_\_ the first fraction the \_\_\_\_\_.

Step 3 – Switch the \_\_\_\_\_ sign to \_\_\_\_\_.

Step 4 – \_\_\_\_\_ the second fraction to the \_\_\_\_\_.

Step 5 – \_\_\_\_\_ if possible.

Step 6 – Multiply \_\_\_\_\_.

Step 7 – Turn into \_\_\_\_\_ form.

Step 8 – Ask yourself “\_\_\_\_\_?”

Sheet 1: Review

Name: \_\_\_\_\_

Turn these into improper fractions (Remember the fishhook!).

$$4\frac{2}{5}$$

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

Multiply these fractions.

$$\frac{2}{5} \times \frac{15}{4}$$

$$\frac{5}{6} \times \frac{3}{10}$$

Multiply these mixed numbers.

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

$$4\frac{2}{7} \times 1\frac{2}{3}$$

Divide these fractions (Keep, Switch, Flip).

$$\frac{3}{4} \div \frac{1}{2}$$

$$\frac{5}{9} \div \frac{1}{3}$$



Divide these mixed numbers (Follow the steps).

$$6 \div 1\frac{1}{3}$$

$$2\frac{2}{10} \div 2\frac{1}{5}$$

Sheet 3: Try these!

Name: \_\_\_\_\_

Evaluate the expression (Remember order of operations).

$$4\frac{3}{8} \div \frac{3}{4} \times \frac{4}{7}$$

$$9\frac{1}{6} \div 5 + 3\frac{1}{3}$$

$$5\frac{5}{6} \div 3\frac{3}{4} - \frac{2}{9}$$

$$1\frac{9}{11} \times 4\frac{7}{12} \div \frac{2}{3}$$