



5th Grade

Tier 2 Intervention Lessons

Readiness Standard 6 - 4.NF.4b

Learning Target: I will multiply a fraction by a whole number

Readiness for 5.NF.4b: Multiply a fraction by fraction

Table of Contents

Session 1: Planning Guide p. 4

Session 1: Re-engagement Lesson Resources p. 5-10

Sessions 2 through 8: Planning Guide p.11

Sessions 2 through 8: Lesson Resources p. 12-52

Independent Practice Activities: “Multiplication Match-up!” p. 53-58

Classroom Poster: Questions for Solving Word Problems p. 59

Tier 1 Support Classroom Poster: Steps for Solving Word Problems p. 60

IES Recommendations for Tier 2 and 3 intervention lessons:

2. Instructional materials for students receiving interventions should focus intensely on in-depth treatment of whole numbers in kindergarten through grade 5 and on rational numbers in grades 4 through 8. These materials should be selected by committee.	Low
3. Instruction during the intervention should be explicit and systematic. This includes providing models of proficient problem solving, verbalization of thought processes, guided practice, corrective feedback, and frequent cumulative review.	Strong
4. Interventions should include instruction on solving word problems that is based on common underlying structures.	Strong
5. Intervention materials should include opportunities for students to work with visual representations of mathematical ideas and interventionists should be proficient in the use of visual representations of mathematical ideas.	Moderate
6. Interventions at all grade levels should devote about 10 minutes in each session to building fluent retrieval of basic arithmetic facts.	Moderate
7. Monitor the progress of students receiving supplemental instruction and other students who are at risk.	Low
8. Include motivational strategies in tier 2 and tier 3 interventions.	Low

(Institute of Educational Sciences, Assisting Students Struggling with Mathematics: Response to Intervention (RtI) for Elementary and Middle Schools, 2009, p. 6)

Gradual release of responsibility model

Teacher Responsibility

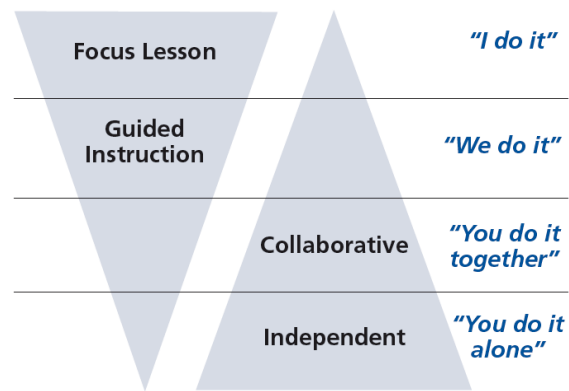


Figure 1

[\(Dr. Douglas Fisher, Effective Use of the Gradual Release of Responsibility Model\)](#)



Planning Guide: Session 1

5th Grade - Readiness Standard 6 - 4.NF.4b

Learning Target: I will multiply a fraction by a whole number

Readiness for multiplying a fraction by a fraction

Recommended Actions	
Beginning (15 min.)	<p><u>Review</u> the readiness standard with the intervention group using the Guided Review</p> <ul style="list-style-type: none">➤ Introduce the learning target and why it is important for future learning➤ Read each question on the Guided Review and ask students to share what they remember from the previous school year.
Middle (5 min.)	<ul style="list-style-type: none">➤ Ask students to <u>reflect</u> on their progress towards the learning target<ul style="list-style-type: none">➤ What did I remember about the learning target?➤ What did I learn today about the learning target?➤ How confident do I feel about doing the learning target on my own?
End (10 min.)	<ul style="list-style-type: none">➤ <u>Assess</u> each student's progress using Quick Check – Form A➤ Guide students to self-correct their Quick Check – Form A➤ Guide students to <u>chart their progress</u> by recording the date and Quick Check score in their Growth Chart➤ Collect each student's Quick Check and Growth Chart
After	<ul style="list-style-type: none">➤ Create sub-groups to differentiate the middle of sessions 2 through 8<ul style="list-style-type: none">○ Group 1 – Include students who <u>did not</u> meet the learning goal○ Group 2 – Include students who met or exceeded the learning goal



5th Grade Fall Guided Review

Readiness Standard 6 - 4.NF.4b

Name _____ Date _____

Learning Target: I will multiply a whole number by a fraction.

1.

$\frac{1}{3} \times 4$ is equivalent to which expression?

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

$\frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3}$

$4 + \frac{1}{3}$

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

2.

Multiply: $3 \times \frac{1}{4}$

$\frac{1}{12}$

$\frac{12}{1}$

$\frac{3}{4}$

$\frac{4}{3}$

3.

Multiply: $4 \times \frac{5}{6}$

$\frac{20}{6}$

$\frac{5}{24}$

$\frac{24}{5}$

$\frac{20}{24}$



5th Grade Winter Guided Review

Readiness Standard 6 - 4.NF.4b

Name _____ Date _____

Learning Target: I will multiply a whole number by a fraction.

1.

$\frac{1}{2} \times 3$ is equivalent to which expression?

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

$\frac{1}{2} + \frac{1}{2} + \frac{1}{2}$

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

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

2.

Multiply: $4 \times \frac{1}{3}$

$\frac{1}{12}$

$\frac{12}{1}$

$\frac{3}{4}$

$\frac{4}{3}$

3.

Multiply: $5 \times \frac{3}{4}$

$\frac{20}{3}$

$\frac{15}{20}$

$\frac{15}{4}$

$\frac{3}{20}$



5th Grade Spring Guided Review

Readiness Standard 6 - 4.NF.4b

Name _____ Date _____

Learning Target: I will multiply a whole number by a fraction.

1.

$\frac{2}{3} \times 4$ is equivalent to which expression?

- $\frac{2}{3} \times \frac{2}{3} \times \frac{2}{3} \times \frac{2}{3}$
- $4 + \frac{2}{3}$
- $\frac{2}{3} + \frac{2}{3} + \frac{2}{3} + \frac{2}{3}$
- $\frac{2}{3} \times \frac{1}{4}$

2.

Multiply: $5 \times \frac{1}{4}$

- $\frac{5}{4}$
- $\frac{4}{5}$
- $\frac{1}{20}$
- $\frac{20}{1}$

3.

Multiply: $3 \times \frac{4}{5}$

- $\frac{4}{15}$
- $\frac{12}{5}$
- $\frac{12}{15}$
- $\frac{15}{4}$



Session 1: Self-Reflection

5th Grade - Readiness Standard 6 - 4.NF.4b

Learning Target: I will multiply a fraction by a whole number

Briefly discuss student responses:

- What did I remember today about multiplying a fraction by a whole number?

- What did I learn today about multiplying a fraction by a whole number?

- How confident do I feel about multiplying a fraction by a whole number on my own?
(Thumbs up, down, or sideways)



Quick Check - Form A

5th Grade - Readiness Standard 6 - 4.NF.4b

Name _____ Date _____

Learning Target: I will multiply a whole number by a fraction.

Directions: Which answer choice has the same value as the multiplication problem.

(Work time: 30 seconds)

1.

$$\frac{1}{3} \times 2 = \underline{\hspace{2cm}}$$

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

$\frac{1}{3} + \frac{1}{3}$

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

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

Directions: Multiply each whole number and fraction. (Work time: 3 minutes)

2.

$$5 \times \frac{1}{3} = \underline{\hspace{2cm}}$$

3.

$$4 \times \frac{5}{7} = \underline{\hspace{2cm}}$$

4.

$$\frac{4}{5} \times 2 = \underline{\hspace{2cm}}$$

5.

$$\frac{3}{4} \times 6 = \underline{\hspace{2cm}}$$



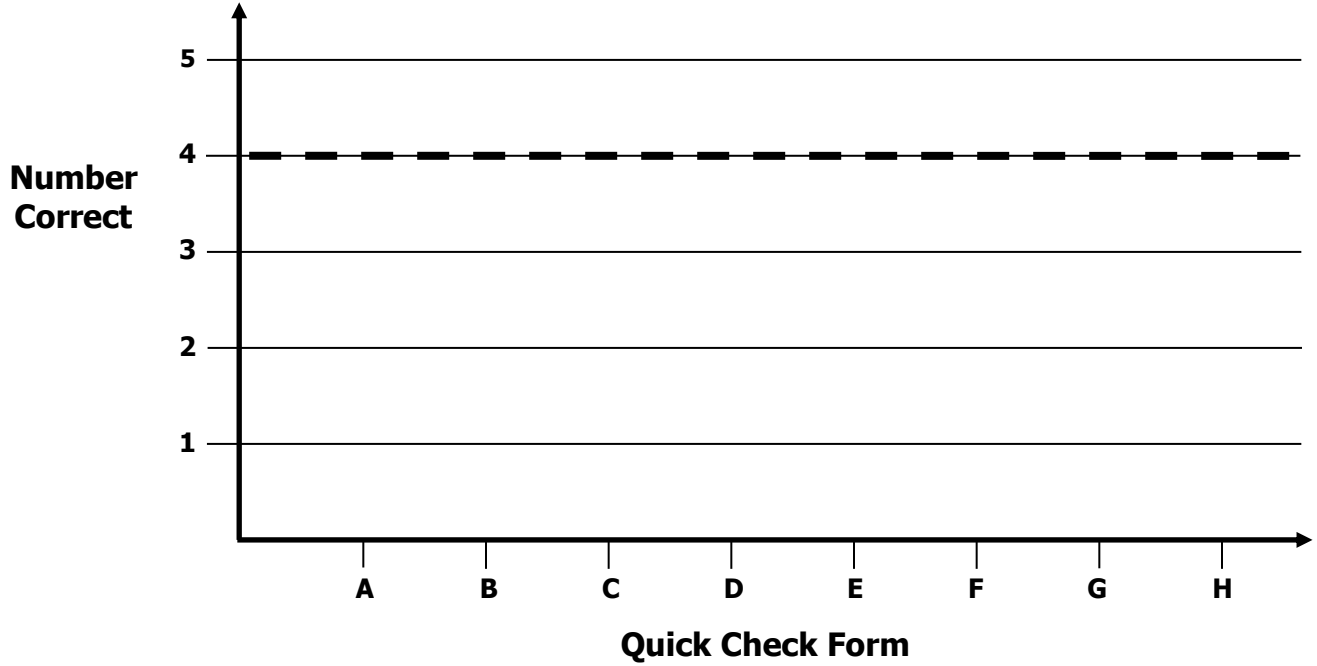
Growth Chart

5th Grade - Readiness Standard 6 - 4.NF.4b

Name _____ Date _____

Learning Target: I will multiply a whole number by a fraction.

Goal: 4 out of 5 correct



Intervention	Date	Score
Session 1:		
Session 2:		
Session 3:		
Session 4:		
Session 5:		
Session 6:		
Session 7:		
Session 8:		



Planning Guide: Sessions 2 Through 8

5th Grade - Readiness Standard 6 - 4.NF.4b

Learning Target: I will multiply a fraction by a whole number

Readiness for multiplying a fraction by a fraction

Recommended Actions			
Beginning (5 min.)	<ul style="list-style-type: none"> ➤ Review the learning target with the whole group and ask each student to set a goal for today's learning 		
Middle (15 min.)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>Group 1: <i>(Students who <u>did not</u> meet the learning goal on the previous Quick Check)</i></p> <ul style="list-style-type: none"> ➤ Model solving a word problem – “I do” ➤ Guided Practice – “We do together/ You do together” <p>Session 2: Use fraction strips to multiply a fraction by a whole number</p> <p>Session 3: Use number lines to multiply a fraction by a whole number</p> <p>Session 4: Use understanding of multiplication as repeated addition to multiply a fraction by a whole number</p> </td> <td style="width: 50%; vertical-align: top;"> <p>Group 2: <i>(Students who met the learning goal)</i></p> <ul style="list-style-type: none"> ➤ Independent practice – “You do alone” <p>Activity: <i>Multiplication Match-up!</i></p> <p style="text-align: center;"><i>(Look for additional activities in 4th grade core instruction resources.)</i></p> </td> </tr> </table>	<p>Group 1: <i>(Students who <u>did not</u> meet the learning goal on the previous Quick Check)</i></p> <ul style="list-style-type: none"> ➤ Model solving a word problem – “I do” ➤ Guided Practice – “We do together/ You do together” <p>Session 2: Use fraction strips to multiply a fraction by a whole number</p> <p>Session 3: Use number lines to multiply a fraction by a whole number</p> <p>Session 4: Use understanding of multiplication as repeated addition to multiply a fraction by a whole number</p>	<p>Group 2: <i>(Students who met the learning goal)</i></p> <ul style="list-style-type: none"> ➤ Independent practice – “You do alone” <p>Activity: <i>Multiplication Match-up!</i></p> <p style="text-align: center;"><i>(Look for additional activities in 4th grade core instruction resources.)</i></p>
<p>Group 1: <i>(Students who <u>did not</u> meet the learning goal on the previous Quick Check)</i></p> <ul style="list-style-type: none"> ➤ Model solving a word problem – “I do” ➤ Guided Practice – “We do together/ You do together” <p>Session 2: Use fraction strips to multiply a fraction by a whole number</p> <p>Session 3: Use number lines to multiply a fraction by a whole number</p> <p>Session 4: Use understanding of multiplication as repeated addition to multiply a fraction by a whole number</p>	<p>Group 2: <i>(Students who met the learning goal)</i></p> <ul style="list-style-type: none"> ➤ Independent practice – “You do alone” <p>Activity: <i>Multiplication Match-up!</i></p> <p style="text-align: center;"><i>(Look for additional activities in 4th grade core instruction resources.)</i></p>		
End (10 min.)	<ul style="list-style-type: none"> ➤ Bring the students back together. ➤ Ask students to reflect on their progress towards the learning target <ul style="list-style-type: none"> ○ What did I learn today about multiplying a fraction by a whole number? ○ How confident do you feel about multiplying a fraction by a whole number on my own? (Thumbs up, down, or sideways) ➤ Assess each student's progress using the next Quick Check form ➤ Guide students to self-correct their Quick Check ➤ Guide students to chart their progress in their Growth Chart <ul style="list-style-type: none"> ○ If not using Delta Math lessons, record the activity in the table ➤ Collect each student's Quick Check and Growth Chart 		
After	<ul style="list-style-type: none"> ➤ Regroup students to differentiate the middle of sessions 3 through 8 <ul style="list-style-type: none"> ○ Promote students who met the learning goal to group 2 ○ Exit students who met the learning goal for a third time ➤ Problem solve with a team to plan additional support for students who did not exit 		



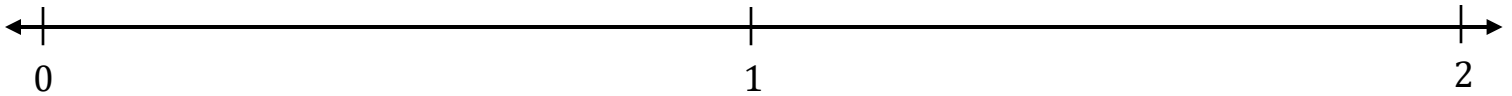
Session 2: Modeling (I Do)

5th Grade - Readiness Standard 6 - 4.NF.4b

Learning Target: I will multiply a fraction by a whole number

Readiness for multiplying a fraction by a fraction

Sam is having some of his friends over for a cookout. If he plans to serve 7 one-quarter pound hamburgers, how many pounds of ground hamburger meat will he need to purchase?





Session 2: Modeling (I Do – Visual Support)

5th Grade - Readiness Standard 6 - 4.NF.4b

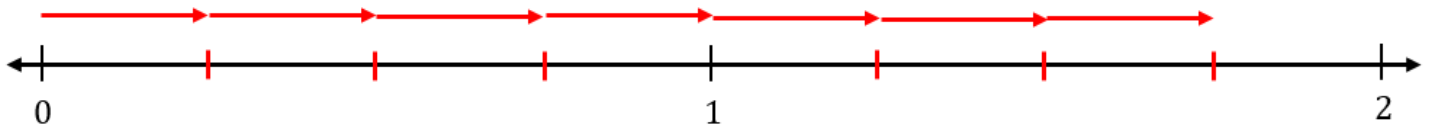
Learning Target: I will multiply a fraction by a whole number

Readiness for multiplying a fraction by a fraction

Sam is having some of his friends over for a cookout. If he plans to serve 7 one-quarter pound hamburgers, how many pounds of ground hamburger meat will he need to purchase?

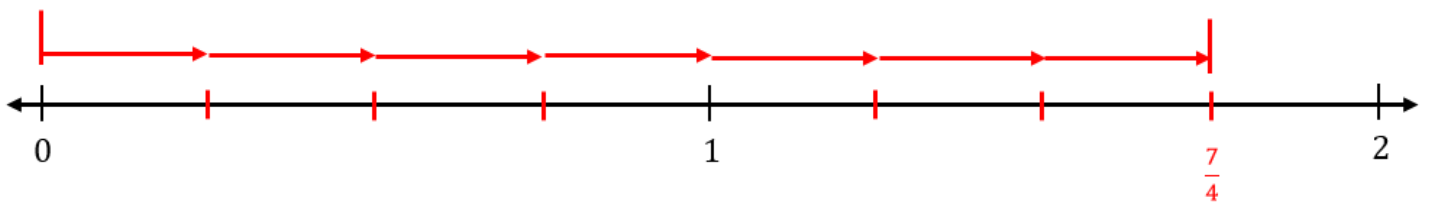
Draw 7 groups of 1-fourth

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



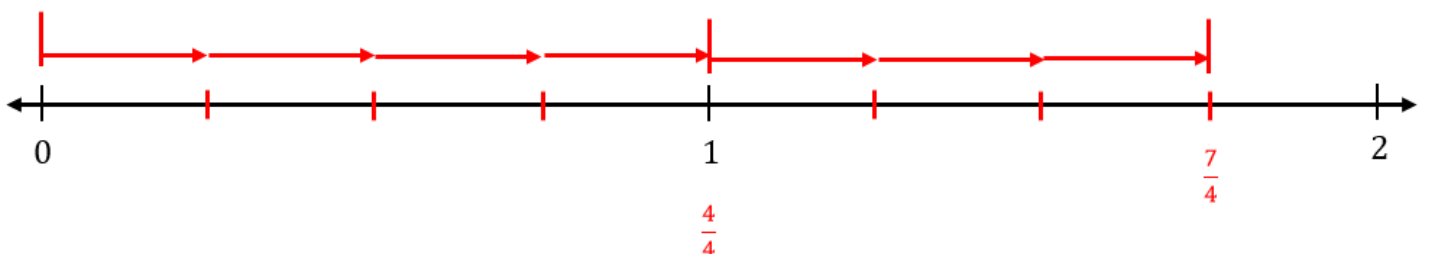
Identify the total

$$7 \times \frac{1}{4} = \frac{7}{4}$$



Simplify the total

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





Session 2: Modeling (I Do - Teacher Notes)

5th Grade - Readiness Standard 6 - 4.NF.4b

Learning Target: I will multiply a fraction by a whole number

Readiness for multiplying a fraction by a fraction

Sam is having some of his friends over for a cookout. If he plans to serve 7 one-quarter pound hamburgers, how many pounds of ground hamburger meat will he need to purchase?

I am going to think aloud to model solving this problem.

Your job is to watch, listen, think and ask questions.

First, it is important to know what the problem is about.

This problem is about Sam having some of his friends over for a cookout.

Second, I need to determine what I need to find.

I need to find how much ground hamburger meat he needs to purchase.

Third, I need to determine what I know.

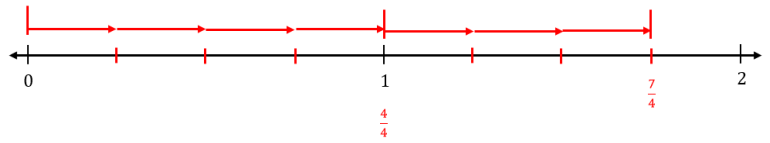
I know that he plans to make 7 one-quarter pound hamburgers.

Fourth, I need to figure out what I can try.

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

I am going to try using fraction strips and a number line to multiply 1 fourth by 7.

(Hold up a template of fraction strips and write the multiplication problem.)



I am going fold my fraction template to so that the “fourths” are visible as the bottom row...

(Fold the template so that four-fourths are visible at the bottom.)

Since Sam plans to make 7 1 fourth pound hamburgers, I will use the fraction strips to mark off 7 fourths...1 fourth, 2 fourths, 3 fourths, ... (Draw each marks to separate the number line into fourths and draw each fraction arrow.)

Now that I have all of the “fourths” represented on the number line, I can verify that there are 7 fourths total.

(Draw slightly larger vertical marks at 0 and 7 fourths above the number line and write = $\frac{7}{4}$ next to the problem.)

Although 7 fourths is an accurate value, it is nicer to simplify answers for others.

I know that 4 fourths is equal to 1 whole. (Draw a vertical mark above the number line at 1 and write $\frac{4}{4}$ below.)

And the fractional part are 3 fourths. (Write = $1 \frac{3}{4}$ next to the problem)

It looks like Sam needs 1 and 3 fourths pounds of hamburger meat.

Last, I need to make sure that my answer makes sense.

I found that Sam needs 1 and 3 fourths pounds of hamburger meat to make 7 one-quarter pound hamburgers. It makes sense because I used a fraction template to draw each fractional amount on a number line and to identify and simplify the total.

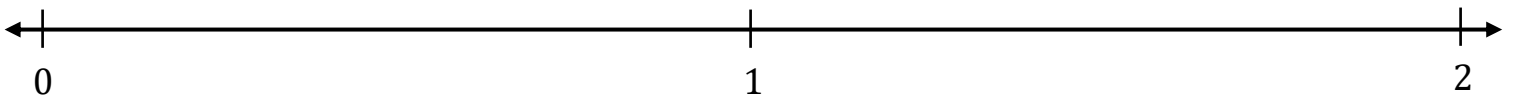
Learning Target: I will multiply a fraction by a whole number

Session 2: Guided Practice (We Do)

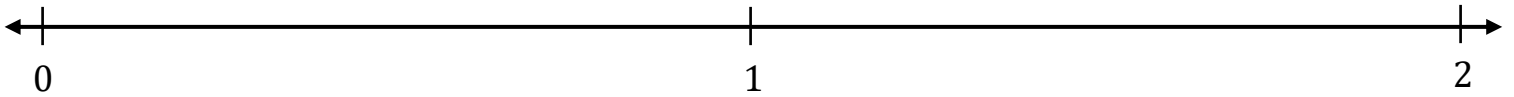
We Do Together: (Teacher Actions)

- Use fraction strips and number lines to multiply fractions by whole numbers.

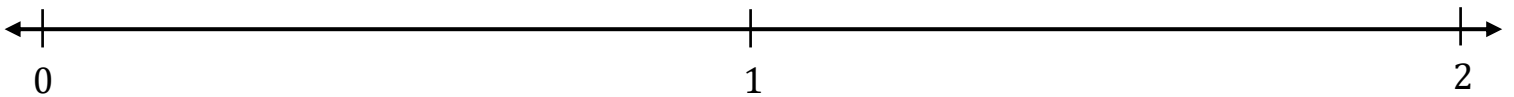
1. $5 \times \frac{1}{3} = \underline{\hspace{2cm}}$



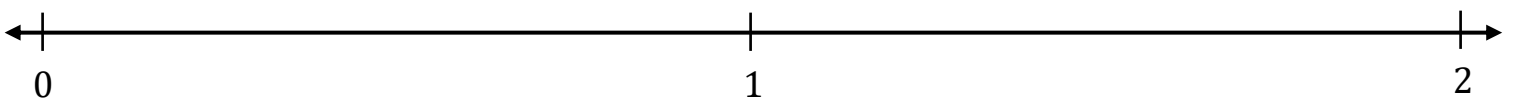
2. $3 \times \frac{2}{4} = \underline{\hspace{2cm}}$



3. $4 \times \frac{3}{8} = \underline{\hspace{2cm}}$



4. $3 \times \frac{2}{6} = \underline{\hspace{2cm}}$



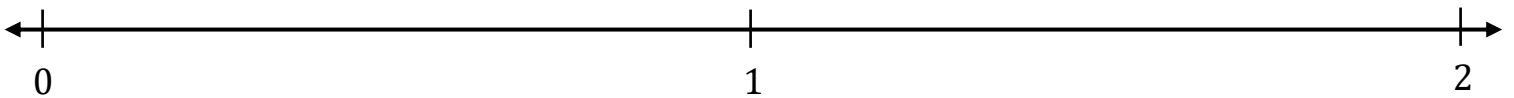
Learning Target: I will multiply a fraction by a whole number

Session 2: Guided Practice (We Do - Continued)

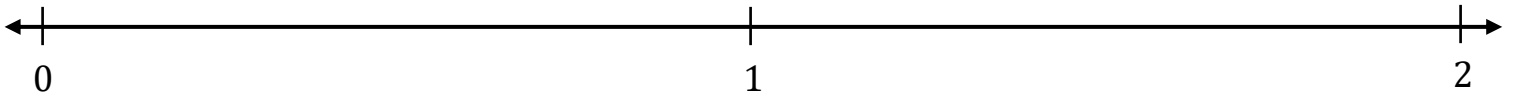
You Do Together: (As a class, or in small groups)

- Students take turns leading using fraction strips and number lines to multiply fractions by whole numbers.

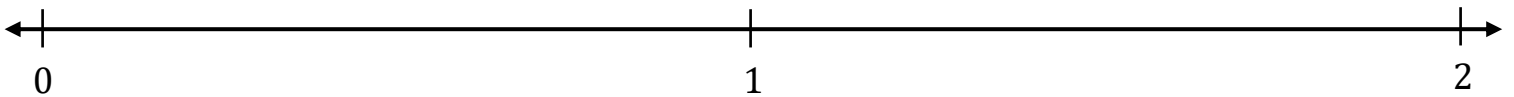
5. $2 \times \frac{3}{4} = \underline{\hspace{2cm}}$



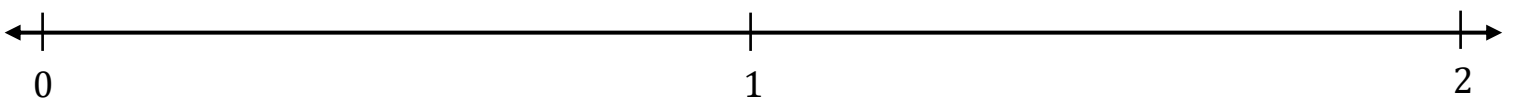
6. $3 \times \frac{1}{2} = \underline{\hspace{2cm}}$



7. $3 \times \frac{2}{3} = \underline{\hspace{2cm}}$



8. $7 \times \frac{2}{8} = \underline{\hspace{2cm}}$



Learning Target: I will multiply a fraction by a whole number

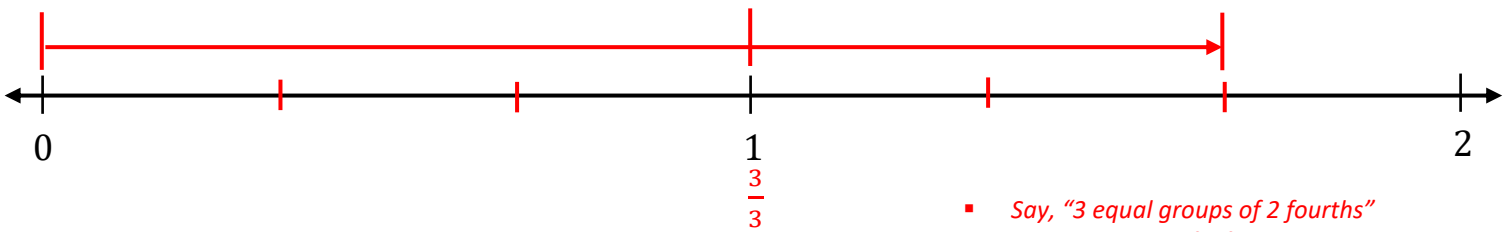
Session 2: Guided Practice (We Do – Teacher Notes)

We Do Together: (Teacher Actions)

➤ Use fraction strips and number lines to add or subtract.

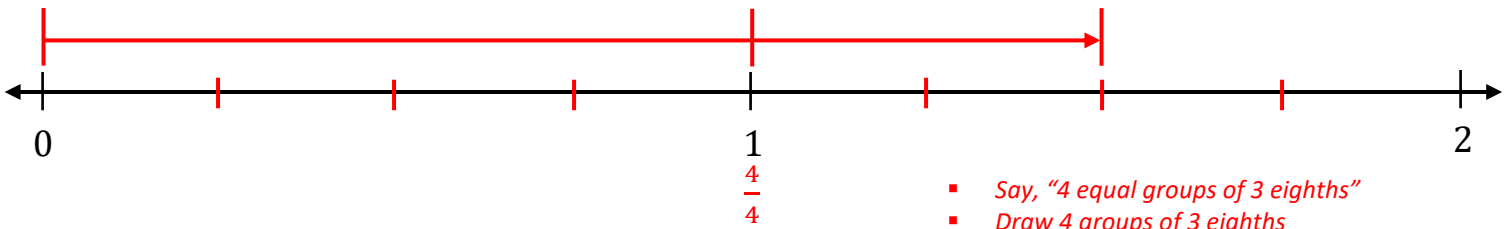
$$1. \quad 5 \times \frac{1}{3} = \frac{5}{3} = 1 \frac{2}{3}$$

- Say, "5 equal groups of 1 third"
- Draw 5 groups of 1 third
- Identify the total
- Simplify by grouping 3 of the thirds into



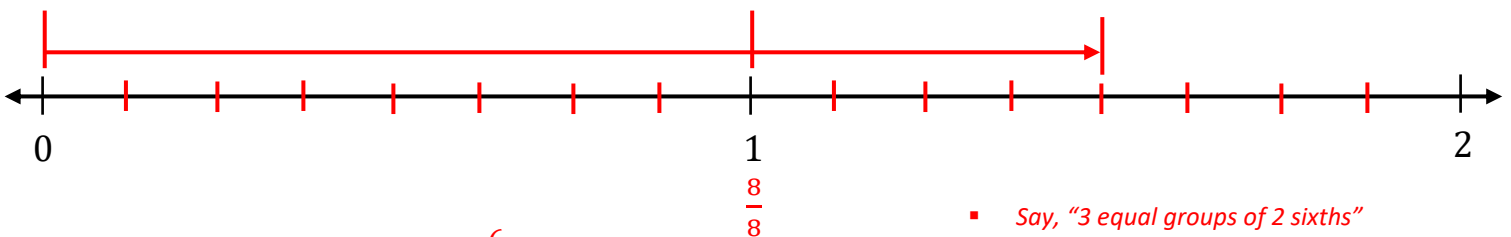
$$2. \quad 3 \times \frac{2}{4} = \frac{6}{4} = 1 \frac{2}{4} = 1 \frac{1}{2}$$

- Say, "3 equal groups of 2 fourths"
- Draw 3 groups of 2 fourths
- Identify the total
- Simplify by grouping 4 of the fourths into 1 whole



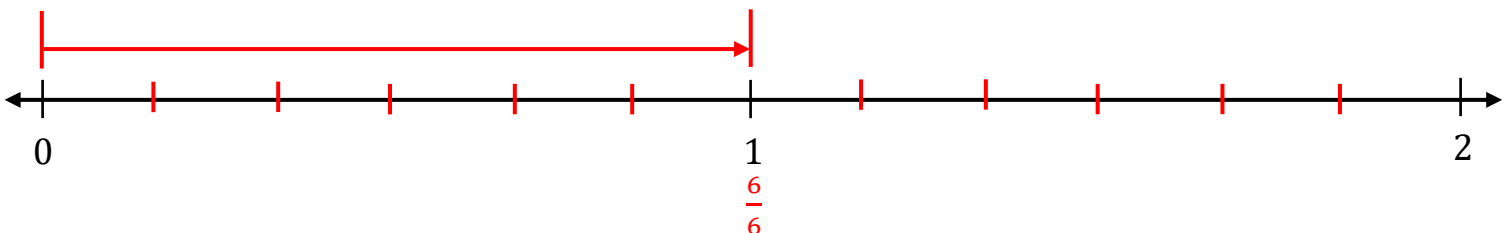
$$3. \quad 4 \times \frac{3}{8} = \frac{12}{8} = 1 \frac{4}{8} = 1 \frac{1}{2}$$

- Say, "4 equal groups of 3 eighths"
- Draw 4 groups of 3 eighths
- Identify the total
- Simplify by grouping 8 of the eighths into 1 whole
- Simplify 1 and 4 eighths to 1 and 1 half



$$4. \quad 3 \times \frac{2}{6} = \frac{6}{6} = 1$$

- Say, "3 equal groups of 2 sixths"
- Draw 3 groups of 2 sixths
- Identify the total
- Simplify by grouping 6 of the sixths into 1 whole





Fraction Strips (4 Sets)

5th Grade - Readiness Standard 6 - 4.NF.4b

Directions: Each student should receive two sets of strips...do not cut into individual strips. (See example on p. 9, *fold the fraction strips twice to show fractional parts of a whole.*)

1 Whole								1 Whole							
$\frac{1}{2}$				$\frac{1}{2}$				$\frac{1}{2}$				$\frac{1}{2}$			
$\frac{1}{3}$		$\frac{1}{3}$		$\frac{1}{3}$		$\frac{1}{3}$		$\frac{1}{3}$		$\frac{1}{3}$		$\frac{1}{3}$			
$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$			
$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$		
$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	
1 Whole								1 Whole							
$\frac{1}{2}$				$\frac{1}{2}$				$\frac{1}{2}$				$\frac{1}{2}$			
$\frac{1}{3}$		$\frac{1}{3}$		$\frac{1}{3}$		$\frac{1}{3}$		$\frac{1}{3}$		$\frac{1}{3}$		$\frac{1}{3}$			
$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$			
$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$		
$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	



Session 2: Self-Reflection

5th Grade - Readiness Standard 6 - 4.NF.4b

Learning Target: I will multiply a fraction by a whole number

Briefly discuss student responses:

- What did I learn today about multiplying a fraction by a whole number?

- How confident do I feel about multiplying a fraction by a whole number on my own?
(Thumbs up, down, or sideways)



Quick Check - Form B

5th Grade - Readiness Standard 6 - 4.NF.4b

Name _____ Date _____

Learning Target: I will multiply a whole number by a fraction.

Directions: Which answer choice has the same value as the multiplication problem.

(Work time: 30 seconds)

$$\frac{1}{3} \times 4 = \underline{\hspace{2cm}}$$

$\frac{1}{3} + \frac{1}{4}$

$4 + \frac{1}{3}$

$\frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3}$

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

Directions: Multiply each whole number and fraction. (Work time: 3 minutes)

2.

$$4 \times \frac{2}{5} = \underline{\hspace{2cm}}$$

3.

$$6 \times \frac{3}{4} = \underline{\hspace{2cm}}$$

4.

$$\frac{3}{7} \times 4 = \underline{\hspace{2cm}}$$

5.

$$\frac{1}{4} \times 5 = \underline{\hspace{2cm}}$$



Session 3: Modeling (I Do)

5th Grade - Readiness Standard 6 - 4.NF.4b

Learning Target: I will multiply a fraction by a whole number

Readiness for multiplying a fraction by a fraction

At the end of yesterday's track practice, Crystal ran around the track 10 times to increase her endurance. If one lap around the track is equal to one-fourth of a mile, how many miles did Crystal run around the track?





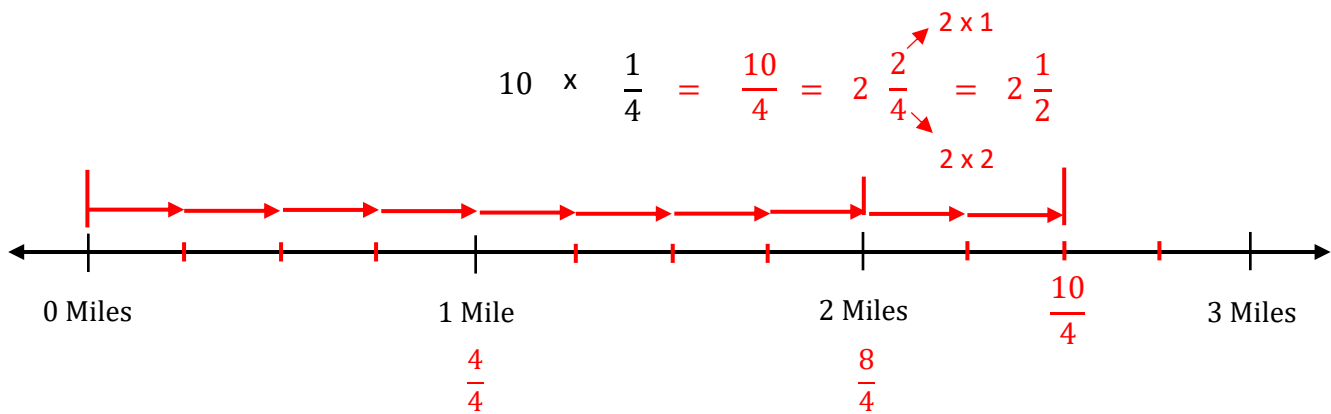
Session 3: Modeling (I Do – Visual Support)

5th Grade - Readiness Standard 6 - 4.NF.4b

Learning Target: I will multiply a fraction by a whole number

Readiness for multiplying a fraction by a fraction

At the end of yesterday's track practice, Crystal ran around the track 10 times to increase her endurance. If one lap around the track is equal to one-fourth of a mile, how many miles did Crystal run around the track?





Session 3: Modeling (I Do - Teacher Notes)

5th Grade - Readiness Standard 6 - 4.NF.4b

Learning Target: I will multiply a fraction by a whole number

Readiness for multiplying a fraction by a fraction

At the end of yesterday’s track practice, Crystal ran around the track 10 times to increase her endurance. If one lap around the track is equal to one-fourth of a mile, how many miles did Crystal run around the track?

I am going to think aloud to model solving this problem.

Your job is to watch, listen, think and ask questions.

First, it is important to know what the problem is about.

This problem is about Crystal running around a track.

Second, I need to determine what I need to find.

I need to find how many miles she ran at the end of yesterday’s practice.

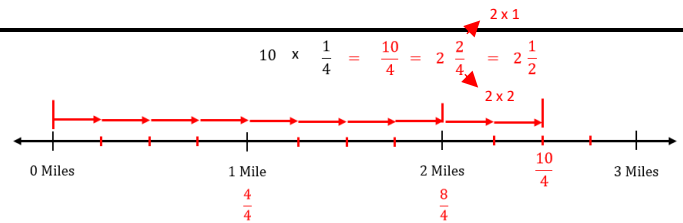
Third, I need to determine what I know.

I know that Crystal ran 1 fourth of a mile time times.

Fourth, I need to figure out what I can try.

I am going to try drawing each fractional part on the number line to find the total.

(Write the multiplication problem above the number line.)



I will begin by drawing 1 fourth of a mile 10 times, but first I need to separate the miles into fourths.

(Separate the each of the whole miles into fourths.)

Now I can begin drawing each arrow that will represent each time around the track.

(Count off and draw each of the 10 arrows...also, write $\frac{4}{4}$ and $\frac{8}{4}$ after drawing the 4th and 8th arrows.)

I see that Crystal ran 10 fourths of a mile.

(Draw a vertical line above the 10 fourths mark on the number line. Then label 10 fourths on the number line and write “= $\frac{10}{4}$ ” next to the problem above.)

I also know that 10 fourths can be simplified as 2 whole miles and 2 fourths.

(Draw a vertical line above the 4 fourths and 8 fourths mark on the number line. Then label both locations and write “= $2 \frac{2}{4}$ ” next to the problem above.)

Lastly, I see that 2 fourths can be simplified as 1 half...I can show this numerically because the numerator and denominator have a common factor of 2...2 is equal to 2 times 1 and 4 is equal to 2 times 2)

(Write “= $2 \frac{1}{2}$ ” next to the problem above.)

Last, I need to make sure that my answer makes sense.

I found that Crystal ran 2 and 1 half miles at the end of yesterday’s practice. It makes sense because I drew each of the 10 laps on a number line to see that 10 fourths is equal to 2 wholes and 1 half.

Learning Target: I will multiply a fraction by a whole number

Session 3: Guided Practice (We Do)

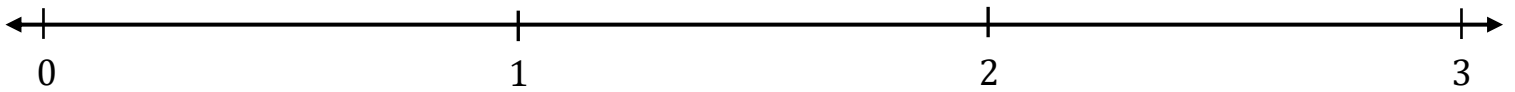
We Do Together: (Teacher Actions)

- Use number lines to multiply fractions by whole numbers.

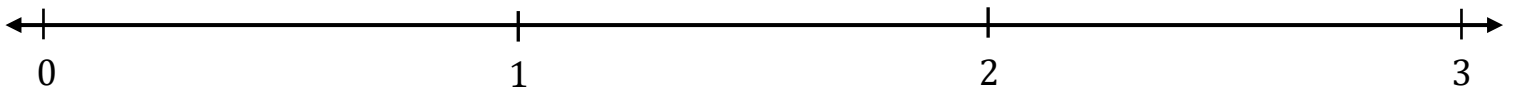
1. $4 \times \frac{2}{3} = \underline{\hspace{2cm}}$



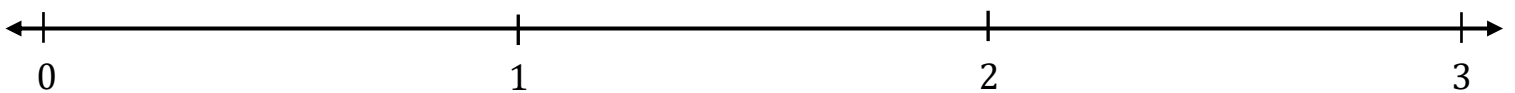
2. $\frac{3}{4} \times 2 = \underline{\hspace{2cm}}$



3. $6 \times \frac{3}{8} = \underline{\hspace{2cm}}$



4. $\frac{2}{5} \times 5 = \underline{\hspace{2cm}}$



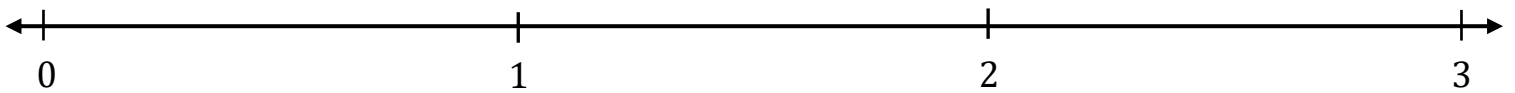
Learning Target: I will multiply a fraction by a whole number

Session 3: Guided Practice (We Do - Continued)

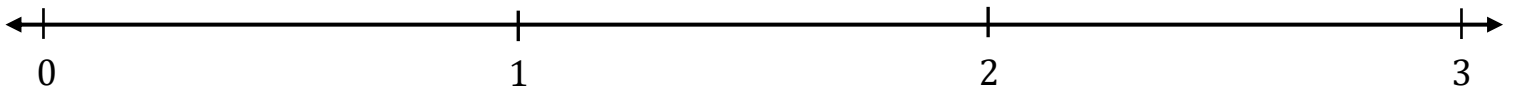
You Do Together: (Teacher Actions)

- Students take turns leading to multiply fractions by whole numbers.

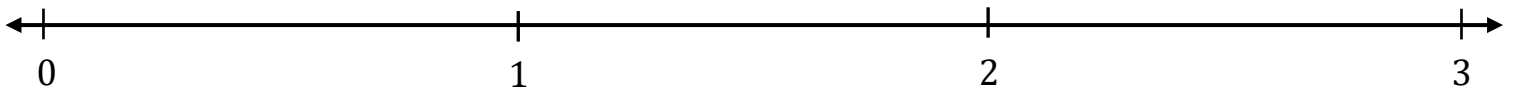
5. $6 \times \frac{2}{4} = \underline{\hspace{2cm}}$



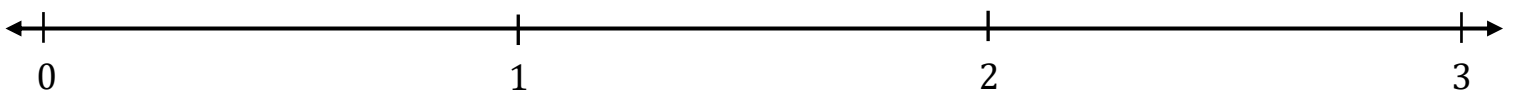
6. $\frac{5}{6} \times 3 = \underline{\hspace{2cm}}$



7. $4 \times \frac{5}{8} = \underline{\hspace{2cm}}$



8. $\frac{3}{4} \times 3 = \underline{\hspace{2cm}}$



Learning Target: I will multiply a fraction by a whole number

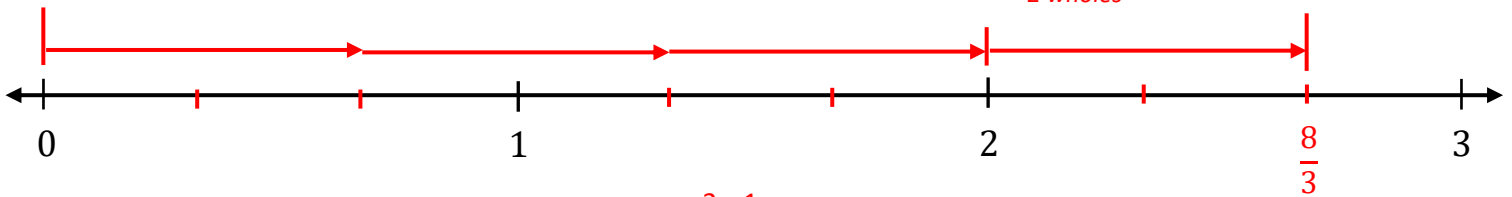
Session 3: Guided Practice (We Do – Teacher Notes)

We Do Together: (Teacher Actions)

- Use number lines to multiply fractions by whole numbers.

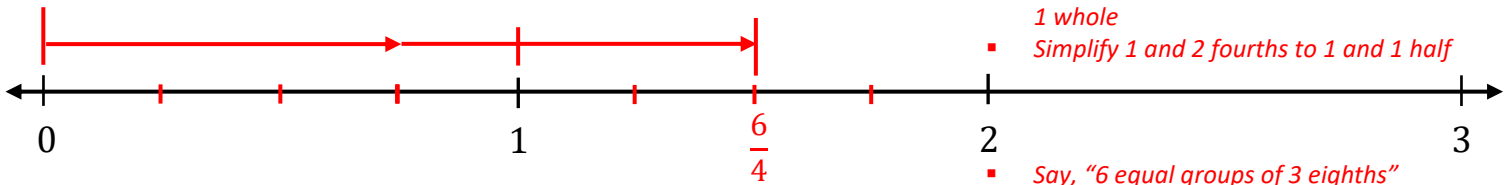
$$1. \quad 4 \times \frac{2}{3} = \frac{8}{3} = 2 \frac{2}{3}$$

- Say, "4 equal groups of 2 thirds"
- Draw 4 groups of 2 thirds
- Identify the total
- Simplify by grouping 6 of the thirds into 2 wholes



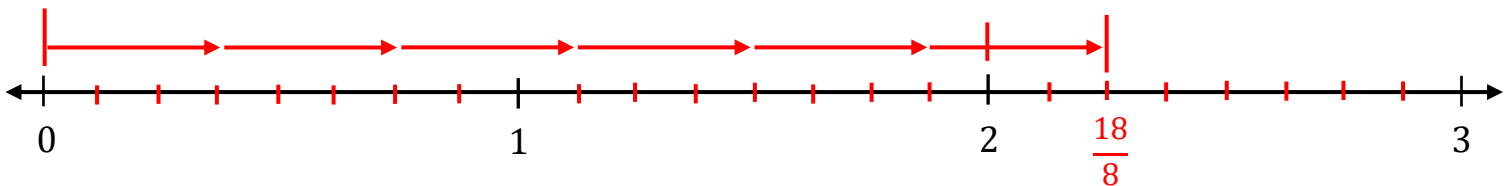
$$2. \quad \frac{3}{4} \times 2 = \frac{6}{4} = 1 \frac{2}{4} = 1 \frac{1}{2}$$

- Say, "2 equal groups of 3 fourths"
- Draw 2 groups of 3 fourths
- Identify the total
- Simplify by grouping 4 of the fourths into 1 whole
- Simplify 1 and 2 fourths to 1 and 1 half



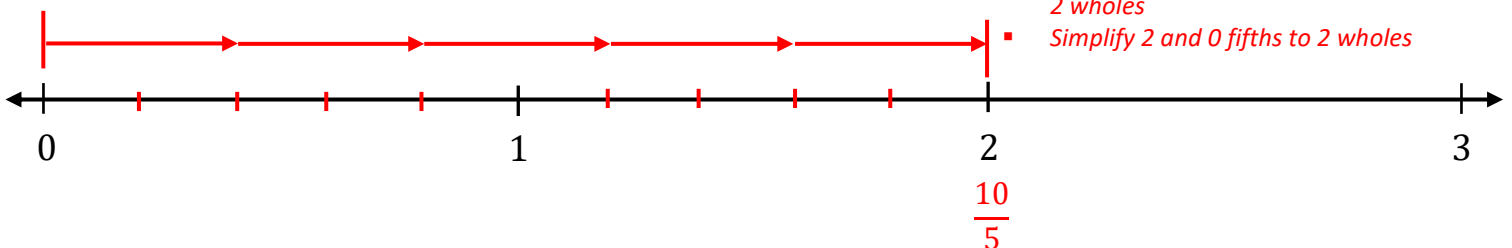
$$3. \quad 6 \times \frac{3}{8} = \frac{18}{8} = 2 \frac{2}{8} = 2 \frac{1}{4}$$

- Say, "6 equal groups of 3 eighths"
- Draw 6 groups of 3 eighths
- Identify the total
- Simplify by grouping 16 of the eighths into 2 wholes
- Simplify 1 and 2 eighths to 1 and 1 fourth



$$4. \quad \frac{2}{5} \times 5 = \frac{10}{5} = 2 \frac{0}{5} = 2$$

- Say, "5 equal groups of 2 fifths"
- Draw 5 groups of 2 fifths
- Identify the total
- Simplify by grouping 10 of the fifths into 2 wholes
- Simplify 2 and 0 fifths to 2 wholes





Session 3: Self-Reflection

5th Grade - Readiness Standard 6 - 4.NF.4b

Learning Target: I will multiply a fraction by a whole number

Briefly discuss student responses:

- What did I learn today about multiplying a fraction by a whole number?

- How confident do I feel about multiplying a fraction by a whole number on my own?
(Thumbs up, down, or sideways)



Quick Check - Form C

5th Grade - Readiness Standard 6 - 4.NF.4b

Name _____ Date _____

Learning Target: I will multiply a whole number by a fraction.

Directions: Which answer choice has the same value as the multiplication problem.

(Work time: 30 seconds)

$$\frac{1}{4} \times 3 = \underline{\hspace{2cm}}$$

$\frac{1}{4} + \frac{1}{4} + \frac{1}{4}$

$\frac{1}{4} + \frac{1}{3}$

$3 + \frac{1}{4}$

$\frac{1}{4} \times \frac{1}{4} \times \frac{1}{4}$

Directions: Multiply each whole number and fraction. (Work time: 3 minutes)

2.

$$2 \times \frac{4}{5} = \underline{\hspace{2cm}}$$

3.

$$5 \times \frac{3}{4} = \underline{\hspace{2cm}}$$

4.

$$\frac{1}{7} \times 3 = \underline{\hspace{2cm}}$$

5.

$$\frac{3}{5} \times 4 = \underline{\hspace{2cm}}$$



Session 4: Modeling (I Do)

5th Grade - Readiness Standard 6 - 4.NF.4b

Learning Target: I will multiply a fraction by a whole number

Readiness for multiplying a fraction by a fraction

On the Delta Math readiness screener, Donna selected the following answer choice. Is she correct? If not, why do you think she chose her answer?

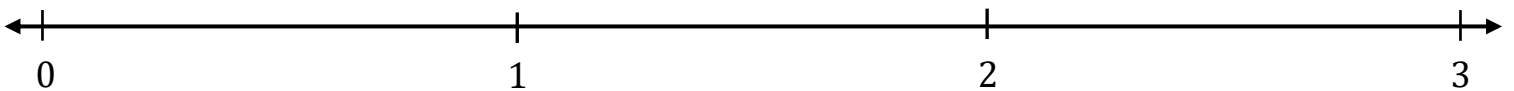
$\frac{1}{3} \times 4$ is equivalent to which expression?

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

$\frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3}$

$4 + \frac{1}{3}$

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





Session 4: Modeling (I Do – Visual Support)

5th Grade - Readiness Standard 6 - 4.NF.4b

Learning Target: I will multiply a fraction by a whole number

Readiness for multiplying a fraction by a fraction

On the Delta Math readiness screener, Donna selected the following answer choice. Is she correct? If not, why do you think she chose her answer?

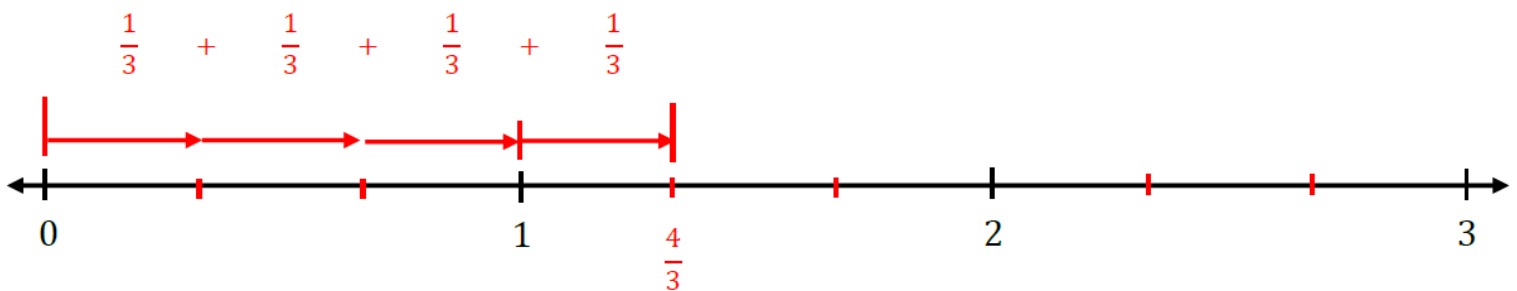
$\frac{1}{3} \times 4$ is equivalent to which expression?

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

$\frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3}$

$4 + \frac{1}{3}$

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





Session 4: Modeling (I Do - Teacher Notes)

5th Grade - Readiness Standard 6 - 4.NF.4b

Learning Target: I will multiply a fraction by a whole number

Readiness for multiplying a fraction by a fraction

On the Delta Math readiness screener, Donna selected the following answer choice. Is she correct? If not, why do you think she chose her answer?

I am going to think aloud to model solving this problem.

Your job is to watch, listen, think and ask questions.

First, it is important to know what the problem is about.

This problem is about Donna answering a problem about multiplication on a Delta Math readiness screener.

Second, I need to determine what I need to find.

I need to find if Donna chose the correct answer. And if she was not correct, I need to consider why she made the choice that she did.

Third, I need to determine what I know.

I know that Donna chose 1 third times 1 third times 1 third times 1 third as the answer to 1 third times 4.

Fourth, I need to figure out what I can try.

I am going to try using my understanding of multiplication to find the correct answer to this question.

Over the past few days, we have multiplying fractions by whole numbers by drawing equal groups of fractions and adding each group to find the total.

(Reveal the number line near the bottom of the “Modelling” page.)

Since I need to make 4 groups of the fraction 1 third...I will separate each whole into 3 equal parts.

(Draw two dash marks between each whole to make thirds.)

Now, I can draw 4 fraction arrows...each equal to 1 third.

(Draw each arrow above the number line.)

I see that 4 times 1 third is equal to 1 and 1 third.

(Draw vertical lines above at 0 and 4 thirds.)

But, 1 and 1 third is not an answer choice...so I will need to find another equivalent expression.

Since multiplication is the same as repeated addition, I can write 1 third plus 1 third plus 1 third plus 1 third.

(Write the addition statement above the arrows.)

I see that this is an answer choice, but not the one Donna chose...therefore, she must have been incorrect.

I think that Donna chose her answer because she saw the fraction 1 third...a multiplication sign...and the number four...and the answer she chose has the fraction 1 third multiplied by itself 4 times.

Last, I need to make sure that my answer makes sense.

I found that Donna was not correct. It makes sense because I drew the original multiplication problem as repeated addition to find two different equivalent expressions...the value of the total and an equivalent addition statement.

Learning Target: I will multiply a fraction by a whole number

Session 4: Guided Practice (We Do)

We Do Together: (Teacher Actions)

- Which answer choice has the same value as the multiplication problem.

1.

$$\frac{1}{5} \times 2 = \underline{\hspace{2cm}}$$

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

 $\frac{1}{5} + \frac{1}{5}$

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

 $\frac{1}{5} \times \frac{1}{5}$

- Use your understanding of multiplication as repeated addition to complete each multiplication problem.

2. $5 \times \frac{2}{3} = \underline{\hspace{2cm}}$	3. $4 \times \frac{3}{7} = \underline{\hspace{2cm}}$
4. $\frac{2}{5} \times 3 = \underline{\hspace{2cm}}$	5. $\frac{3}{4} \times 2 = \underline{\hspace{2cm}}$

Learning Target: I will multiply a fraction by a whole number

Session 4: Guided Practice (We Do - Continued)

You Do Together: (As a class, or in small groups)

- Students take turns leading to answer each problem using their understanding of multiplication.
- Which answer choice has the same value as the multiplication problem.

6.

$$\frac{1}{7} \times 3 = \underline{\hspace{2cm}}$$

$\frac{1}{7} + \frac{1}{3}$

$\frac{1}{7} + \frac{1}{7} + \frac{1}{7}$

$3 + \frac{1}{7}$

$\frac{1}{7} \times \frac{1}{7} \times \frac{1}{7}$

- Use your understanding of multiplication as repeated addition to complete each multiplication problem.

7.

$$4 \times \frac{1}{3} = \underline{\hspace{2cm}}$$

8.

$$3 \times \frac{5}{6} = \underline{\hspace{2cm}}$$

9.

$$\frac{3}{5} \times 2 = \underline{\hspace{2cm}}$$

10.

$$\frac{2}{7} \times 5 = \underline{\hspace{2cm}}$$

Learning Target: I will multiply a fraction by a whole number

Session 4: Guided Practice (We Do – Teacher Notes)

We Do Together: (Teacher Actions)

- Which answer choice has the same value as the multiplication problem.

1.

$$\frac{1}{5} \times 2 = \underline{\hspace{2cm}}$$

$\frac{1}{5} + \frac{1}{5}$

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

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

$\frac{1}{5} \times \frac{1}{5}$

- I need to find an equal expression to 1 fifth times 2
- I know that 1 fifth times 2 is equal to 2 equal groups of 1 fifth"
- I can find the total of 2 equal groups by adding each group together
- 1 fifth plus 1 fifth is the only correct answer choice
- It makes sense because multiplying by a whole number can always be represented by repeated addition

- Use your understanding of multiplication as repeated addition to complete each multiplication problem.

<p>2.</p> $5 \times \frac{2}{3} = \underline{3 \frac{1}{3}}$ $\frac{2}{3} + \frac{2}{3} + \frac{2}{3} + \frac{2}{3} + \frac{2}{3} = \frac{10}{3} = 3 \frac{1}{3}$	<p>3.</p> $4 \times \frac{3}{7} = \underline{1 \frac{5}{7}}$ $\frac{3}{7} + \frac{3}{7} + \frac{3}{7} + \frac{3}{7} = \frac{12}{7} = 1 \frac{5}{7}$
<p>4.</p> $\frac{2}{5} \times 3 = \underline{1 \frac{1}{5}}$ $\frac{2}{5} + \frac{2}{5} + \frac{2}{5} = \frac{6}{5} = 1 \frac{1}{5}$	<p>5.</p> $\frac{3}{4} \times 2 = \underline{1 \frac{1}{2}}$ $\frac{3}{4} + \frac{3}{4} = \frac{6}{4} = 1 \frac{2}{4} = 1 \frac{1}{2}$ <div style="text-align: center; margin-top: 10px;"> </div>



Session 4: Self-Reflection

5th Grade - Readiness Standard 6 - 4.NF.4b

Learning Target: I will multiply a fraction by a whole number

Briefly discuss student responses:

- What did I learn today about multiplying a fraction by a whole number?

- How confident do I feel about multiplying a fraction by a whole number on my own?
(Thumbs up, down, or sideways)



Quick Check - Form D

5th Grade - Readiness Standard 6 - 4.NF.4b

Name _____ Date _____

Learning Target: I will multiply a whole number by a fraction.

Directions: Which answer choice has the same value as the multiplication problem.

(Work time: 30 seconds)

$$\frac{1}{3} \times 5 = \underline{\hspace{2cm}}$$

$\frac{1}{3} + \frac{1}{5}$

$5 + \frac{1}{3}$

$\frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3}$

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

Directions: Multiply each whole number and fraction. (Work time: 3 minutes)

2.

$$4 \times \frac{2}{5} = \underline{\hspace{2cm}}$$

3.

$$6 \times \frac{1}{4} = \underline{\hspace{2cm}}$$

4.

$$\frac{3}{7} \times 4 = \underline{\hspace{2cm}}$$

5.

$$\frac{3}{4} \times 5 = \underline{\hspace{2cm}}$$

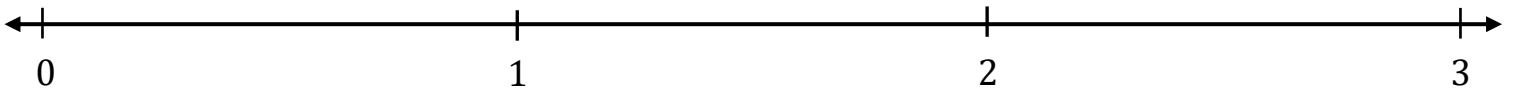
Learning Target: I will multiply a fraction by a whole number

Session 5: Guided Practice (We Do)

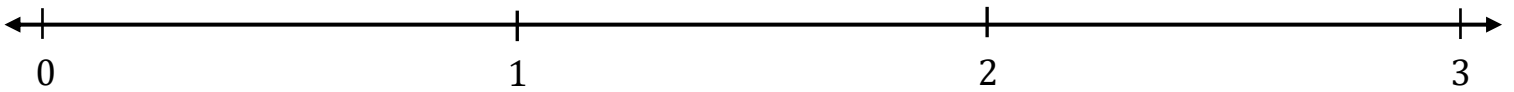
We Do Together: (Teacher Actions)

- Use number lines to multiply fractions by whole numbers.

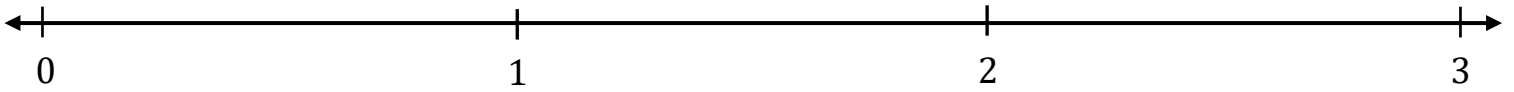
1. $2 \times \frac{3}{4} =$ _____



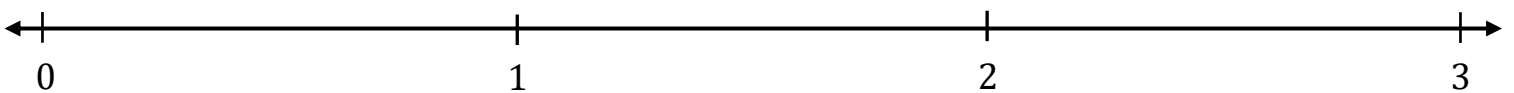
2. $\frac{3}{5} \times 3 =$ _____



3. $5 \times \frac{3}{8} =$ _____



4. $\frac{2}{3} \times 4 =$ _____



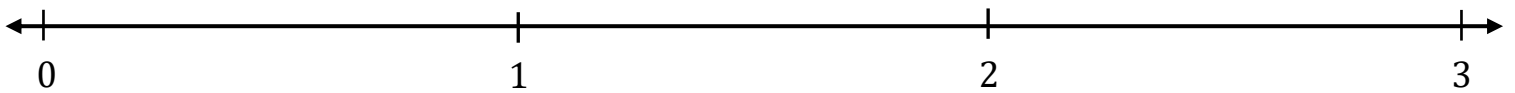
Learning Target: I will multiply a fraction by a whole number

Session 5: Guided Practice (We Do - Continued)

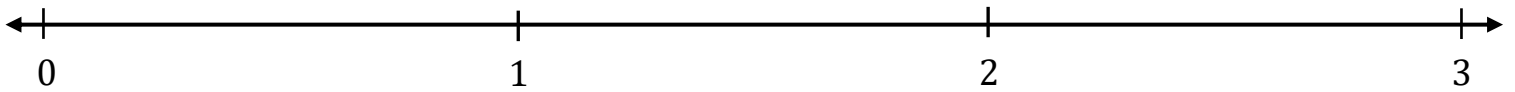
You Do Together: (Teacher Actions)

- Students take turns leading to multiply fractions by whole numbers.

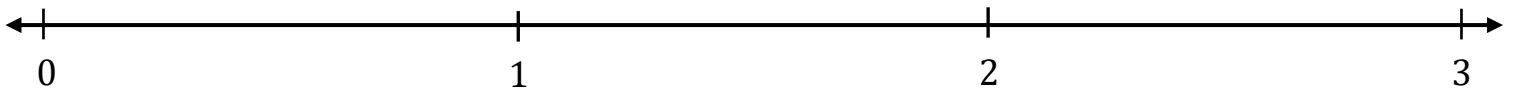
5. $5 \times \frac{2}{4} = \underline{\hspace{2cm}}$



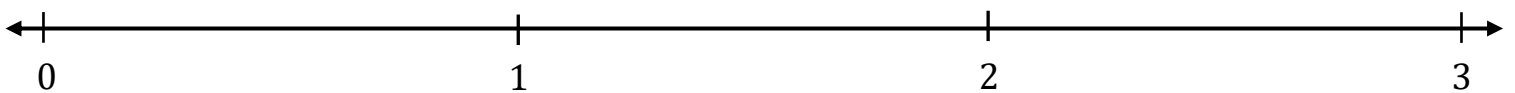
6. $\frac{5}{6} \times 2 = \underline{\hspace{2cm}}$



7. $4 \times \frac{3}{8} = \underline{\hspace{2cm}}$



8. $\frac{3}{5} \times 4 = \underline{\hspace{2cm}}$





Session 5: Self-Reflection

5th Grade - Readiness Standard 6 - 4.NF.4b

Learning Target: I will multiply a fraction by a whole number

Briefly discuss student responses:

- What did I learn today about multiplying a fraction by a whole number?

- How confident do I feel about multiplying a fraction by a whole number on my own?
(Thumbs up, down, or sideways)



Quick Check - Form E

5th Grade - Readiness Standard 6 - 4.NF.4b

Name _____ Date _____

Learning Target: I will multiply a whole number by a fraction.

Directions: Which answer choice has the same value as the multiplication problem.

(Work time: 30 seconds)

1.

$$\frac{1}{3} \times 2 = \underline{\hspace{2cm}}$$

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

$\frac{1}{3} + \frac{1}{3}$

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

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

Directions: Multiply each whole number and fraction. (Work time: 3 minutes)

2.

$$5 \times \frac{1}{3} = \underline{\hspace{2cm}}$$

3.

$$4 \times \frac{5}{7} = \underline{\hspace{2cm}}$$

4.

$$\frac{4}{5} \times 2 = \underline{\hspace{2cm}}$$

5.

$$\frac{3}{4} \times 6 = \underline{\hspace{2cm}}$$

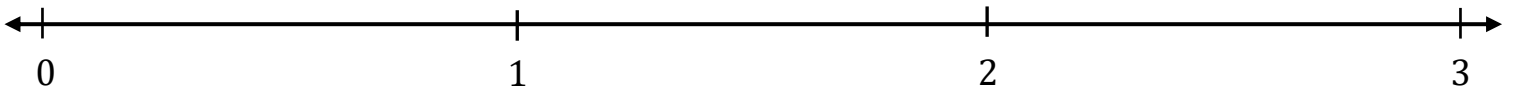
Learning Target: I will multiply a fraction by a whole number

Session 6: Guided Practice (We Do)

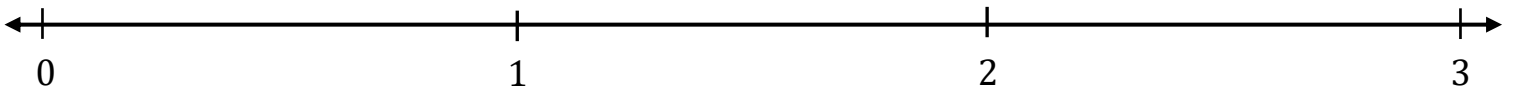
We Do Together: (Teacher Actions)

- Use number lines to multiply fractions by whole numbers.

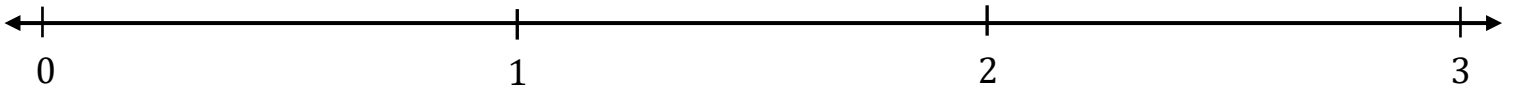
1. $2 \times \frac{5}{6} = \underline{\hspace{2cm}}$



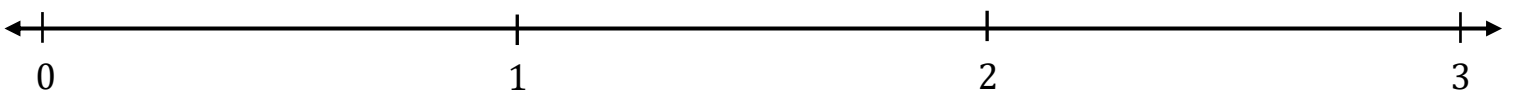
2. $\frac{4}{5} \times 3 = \underline{\hspace{2cm}}$



3. $5 \times \frac{3}{8} = \underline{\hspace{2cm}}$



4. $\frac{2}{5} \times 4 = \underline{\hspace{2cm}}$



Learning Target: I will multiply a fraction by a whole number

Session 6: Guided Practice (We Do - Continued)

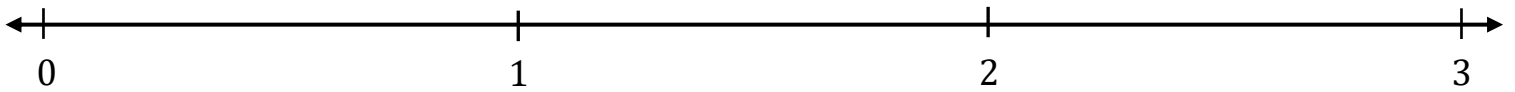
You Do Together: (Teacher Actions)

- Students take turns leading to multiply fractions by whole numbers.

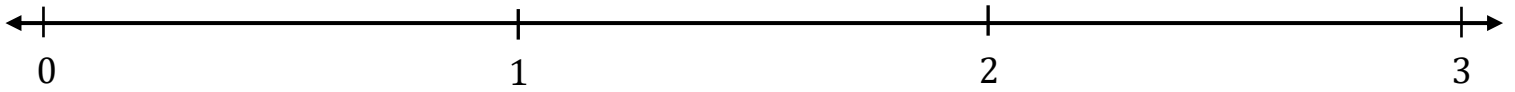
5. $5 \times \frac{2}{4} = \underline{\hspace{2cm}}$



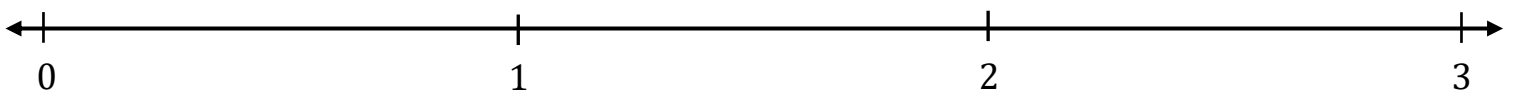
6. $\frac{5}{6} \times 2 = \underline{\hspace{2cm}}$



7. $3 \times \frac{5}{8} = \underline{\hspace{2cm}}$



8. $\frac{3}{4} \times 4 = \underline{\hspace{2cm}}$





Session 6: Self-Reflection

5th Grade - Readiness Standard 6 - 4.NF.4b

Learning Target: I will multiply a fraction by a whole number

Briefly discuss student responses:

- What did I learn today about multiplying a fraction by a whole number?

- How confident do I feel about multiplying a fraction by a whole number on my own?
(Thumbs up, down, or sideways)



Quick Check - Form F

5th Grade - Readiness Standard 6 - 4.NF.4b

Name _____ Date _____

Learning Target: I will multiply a whole number by a fraction.

Directions: Which answer choice has the same value as the multiplication problem.

(Work time: 30 seconds)

$$\frac{1}{3} \times 4 = \underline{\hspace{2cm}}$$

$\frac{1}{3} + \frac{1}{4}$

$4 + \frac{1}{3}$

$\frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3}$

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

Directions: Multiply each whole number and fraction. (Work time: 3 minutes)

2.

$$4 \times \frac{2}{5} = \underline{\hspace{2cm}}$$

3.

$$6 \times \frac{3}{4} = \underline{\hspace{2cm}}$$

4.

$$\frac{3}{7} \times 4 = \underline{\hspace{2cm}}$$

5.

$$\frac{1}{4} \times 5 = \underline{\hspace{2cm}}$$

Learning Target: I will multiply a fraction by a whole number

Session 7: Guided Practice (We Do)

We Do Together: (Teacher Actions)

- Which answer choice has the same value as the multiplication problem.

1.

$$\frac{1}{7} \times 2 = \underline{\hspace{2cm}}$$

$\frac{1}{7} + \frac{1}{2}$

$\frac{1}{7} + \frac{1}{7}$

$2 + \frac{1}{7}$

$\frac{1}{7} \times \frac{1}{7}$

- Use your understanding of multiplication as repeated addition to complete each multiplication problem.

2.

$$4 \times \frac{2}{3} = \underline{\hspace{2cm}}$$

3.

$$5 \times \frac{3}{7} = \underline{\hspace{2cm}}$$

4.

$$\frac{4}{5} \times 3 = \underline{\hspace{2cm}}$$

5.

$$\frac{7}{8} \times 2 = \underline{\hspace{2cm}}$$

Learning Target: I will multiply a fraction by a whole number

Session 7: Guided Practice (We Do - Continued)

You Do Together: (As a class, or in small groups)

- Students take turns leading to answer each problem using their understanding of multiplication.
- Which answer choice has the same value as the multiplication problem.

6.

$$\frac{1}{4} \times 3 = \underline{\hspace{2cm}}$$

$\frac{1}{4} + \frac{1}{3}$

$\frac{1}{4} + \frac{1}{4} + \frac{1}{4}$

$3 + \frac{1}{4}$

$\frac{1}{4} \times \frac{1}{4} \times \frac{1}{4}$

- Use your understanding of multiplication as repeated addition to complete each multiplication problem.

7.

$$5 \times \frac{1}{3} = \underline{\hspace{2cm}}$$

8.

$$4 \times \frac{5}{6} = \underline{\hspace{2cm}}$$

9.

$$\frac{3}{5} \times 6 = \underline{\hspace{2cm}}$$

10.

$$\frac{4}{7} \times 5 = \underline{\hspace{2cm}}$$



Session 7: Self-Reflection

5th Grade - Readiness Standard 6 - 4.NF.4b

Learning Target: I will multiply a fraction by a whole number

Briefly discuss student responses:

- What did I learn today about multiplying a fraction by a whole number?

- How confident do I feel about multiplying a fraction by a whole number on my own?
(Thumbs up, down, or sideways)



Quick Check - Form G

5th Grade - Readiness Standard 6 - 4.NF.4b

Name _____ Date _____

Learning Target: I will multiply a whole number by a fraction.

Directions: Which answer choice has the same value as the multiplication problem.

(Work time: 30 seconds)

$$\frac{1}{4} \times 3 = \underline{\hspace{2cm}}$$

$\frac{1}{4} + \frac{1}{4} + \frac{1}{4}$

$\frac{1}{4} + \frac{1}{3}$

$3 + \frac{1}{4}$

$\frac{1}{4} \times \frac{1}{4} \times \frac{1}{4}$

Directions: Multiply each whole number and fraction. (Work time: 3 minutes)

2.

$$2 \times \frac{4}{5} = \underline{\hspace{2cm}}$$

3.

$$5 \times \frac{3}{4} = \underline{\hspace{2cm}}$$

4.

$$\frac{1}{7} \times 3 = \underline{\hspace{2cm}}$$

5.

$$\frac{3}{5} \times 4 = \underline{\hspace{2cm}}$$

Learning Target: I will multiply a fraction by a whole number

Session 8: Guided Practice (We Do)

We Do Together: (Teacher Actions)

- Which answer choice has the same value as the multiplication problem.

1.

$$\frac{1}{5} \times 4 = \underline{\hspace{2cm}}$$

<input type="radio"/> $\frac{1}{5} + \frac{1}{4}$	<input type="radio"/> $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5}$
<input type="radio"/> $4 + \frac{1}{5}$	<input type="radio"/> $\frac{1}{5} \times \frac{1}{5} \times \frac{1}{5} \times \frac{1}{5}$

- Use your understanding of multiplication as repeated addition to complete each multiplication problem.

<p>2.</p> $5 \times \frac{2}{9} = \underline{\hspace{2cm}}$	<p>3.</p> $4 \times \frac{3}{5} = \underline{\hspace{2cm}}$
<p>4.</p> $\frac{2}{3} \times 6 = \underline{\hspace{2cm}}$	<p>5.</p> $\frac{5}{7} \times 3 = \underline{\hspace{2cm}}$

Learning Target: I will multiply a fraction by a whole number

Session 8: Guided Practice (We Do - Continued)

You Do Together: (As a class, or in small groups)

- Students take turns leading to answer each problem using their understanding of multiplication.
- Which answer choice has the same value as the multiplication problem.

6.

$$\frac{1}{7} \times 2 = \underline{\hspace{2cm}}$$

$\frac{1}{7} + \frac{1}{2}$

$\frac{1}{7} + \frac{1}{7}$

$2 + \frac{1}{7}$

$\frac{1}{7} \times \frac{1}{7}$

- Use your understanding of multiplication as repeated addition to complete each multiplication problem.

7.

$$4 \times \frac{2}{3} = \underline{\hspace{2cm}}$$

8.

$$2 \times \frac{5}{6} = \underline{\hspace{2cm}}$$

9.

$$\frac{4}{5} \times 5 = \underline{\hspace{2cm}}$$

10.

$$\frac{6}{7} \times 4 = \underline{\hspace{2cm}}$$



Session 8: Self-Reflection

5th Grade - Readiness Standard 6 - 4.NF.4b

Learning Target: I will multiply a fraction by a whole number

Briefly discuss student responses:

- What did I learn today about multiplying a fraction by a whole number?

- How confident do I feel about multiplying a fraction by a whole number on my own?
(Thumbs up, down, or sideways)



Quick Check - Form H

5th Grade - Readiness Standard 6 - 4.NF.4b

Name _____ Date _____

Learning Target: I will multiply a whole number by a fraction.

Directions: Which answer choice has the same value as the multiplication problem.

(Work time: 30 seconds)

$$\frac{1}{3} \times 5 = \underline{\hspace{2cm}}$$

$\frac{1}{3} + \frac{1}{5}$

$5 + \frac{1}{3}$

$\frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3}$

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

Directions: Multiply each whole number and fraction. (Work time: 3 minutes)

2.

$$4 \times \frac{2}{5} = \underline{\hspace{2cm}}$$

3.

$$6 \times \frac{1}{4} = \underline{\hspace{2cm}}$$

4.

$$\frac{3}{7} \times 4 = \underline{\hspace{2cm}}$$

5.

$$\frac{3}{4} \times 5 = \underline{\hspace{2cm}}$$



Independent Practice (You Do)

5th Grade - Readiness Standard 6 - 4.NF.4b

Learning Target: I will multiply a fraction by a whole number

Readiness for multiplying a fraction by a fraction

Title of Game: Play “**Multiplication Match-up!**”

Number of Players: 2

Objective: To match your answer cards to unknown problem cards.

Materials:

- 1 set of **Problem** and **Answer** cards per group
- 1 recording sheet per player

Set-up:

- Deal all 10 **Problem** cards face down in a row.
- Deal 5 **Answer** cards face up to each player.

Directions:

- **Player 1** goes first
 - Take a card from the row of face down **Problem** cards and turn it face up
 - Write the problem on the recording sheet
 - And, find the answer in simplest form
- If **Player 1** has the **Answer** card, place it face up on top of the **Problem** card, take both cards and say:
“The answer to ___ is equal to ___.”
- If **Player 1** does not have the answer to the **Problem** card, turn the **Problem** card back over.
- **Players 1 and 2** alternate turns. The **winner** is the first player to match all 5 of their cards.



Names _____

Date _____

5th Grade - RS 6 - 4.NF.4b

Learning Target: I will multiply a fraction by a whole number

Independent Practice: Multiplication Match-up!

(Recording Sheet)



Problem Cards (Set A₁ and A₂)

5th Grade - Readiness Standard 6 - 4.NF.4b

Storage Suggestions: Copy the **Problem (Set A)** cards and **Answer (Set A)** cards in two different colors.

Store 1 set of each in a sealable bag for each pair of students.

Set A ₁	$2 \times \frac{1}{4}$ Set A ₁	$3 \times \frac{2}{5}$ Set A ₁	$4 \times \frac{3}{4}$ Set A ₁	$5 \times \frac{2}{3}$ Set A ₁
	$\frac{2}{5} \times 4$ Set A ₁	$\frac{3}{4} \times 5$ Set A ₁	$\frac{2}{3} \times 6$ Set A ₁	
	$4 \times \frac{1}{6}$ Set A ₁	$5 \times \frac{2}{5}$ Set A ₁	$6 \times \frac{3}{4}$ Set A ₁	
Set A ₂	$2 \times \frac{1}{4}$ Set A ₂	$3 \times \frac{2}{5}$ Set A ₂	$4 \times \frac{3}{4}$ Set A ₂	$5 \times \frac{2}{3}$ Set A ₂
	$\frac{2}{5} \times 4$ Set A ₂	$\frac{3}{4} \times 5$ Set A ₂	$\frac{2}{3} \times 6$ Set A ₂	
	$4 \times \frac{1}{6}$ Set A ₂	$5 \times \frac{2}{5}$ Set A ₂	$6 \times \frac{3}{4}$ Set A ₂	



Answer Cards (Set A₁ and A₂)

5th Grade - Readiness Standard 6 - 4.NF.4b

Storage Suggestions: Copy the **Problem (Set A)** cards and **Answer (Set A)** cards in two different colors.

Store 1 set of each in a sealable bag for each pair of students.

Set A ₁	$\frac{1}{2}$ Set A ₁	Set A ₁	2 Set A ₁	3 Set A ₁
	$1\frac{1}{5}$ Set A ₁	$1\frac{3}{5}$ Set A ₁	Set A ₁	4 Set A ₁
	$3\frac{1}{3}$ Set A ₁	$3\frac{3}{4}$ Set A ₁	$\frac{2}{3}$ Set A ₁	$4\frac{1}{2}$ Set A ₁
Set A ₂	$\frac{1}{2}$ Set A ₂	Set A ₂	2 Set A ₂	3 Set A ₂
	$1\frac{1}{5}$ Set A ₂	$1\frac{3}{5}$ Set A ₂	Set A ₂	4 Set A ₂
	$3\frac{1}{3}$ Set A ₂	$3\frac{3}{4}$ Set A ₂	$\frac{2}{3}$ Set A ₂	$4\frac{1}{2}$ Set A ₂



Problem Cards (Set B₁ and B₂)

5th Grade - Readiness Standard 6 - 4.NF.4b

Storage Suggestions: Copy the **Problem (Set B)** cards and **Answer (Set B)** cards in two different colors.

Store 1 set of each in a sealable bag for each pair of students.

Set B ₁	$5 \times \frac{1}{4}$ Set B ₁	$6 \times \frac{2}{5}$ Set B ₁	$7 \times \frac{3}{4}$ Set B ₁	$8 \times \frac{2}{3}$ Set B ₁
	$\frac{1}{4} \times 8$ Set B ₁	$\frac{2}{5} \times 9$ Set B ₁	$\frac{3}{4} \times 8$ Set B ₁	$\frac{1}{3} \times 9$ Set B ₁
	$9 \times \frac{1}{5}$ Set B ₁	$8 \times \frac{1}{6}$ Set B ₁		
Set B ₂	$5 \times \frac{1}{4}$ Set B ₂	$6 \times \frac{2}{5}$ Set B ₂	$7 \times \frac{3}{4}$ Set B ₂	$8 \times \frac{2}{3}$ Set B ₂
	$\frac{1}{4} \times 8$ Set B ₂	$\frac{2}{5} \times 9$ Set B ₂	$\frac{3}{4} \times 8$ Set B ₂	$\frac{1}{3} \times 9$ Set B ₂
	$9 \times \frac{1}{5}$ Set B ₂	$8 \times \frac{1}{6}$ Set B ₂		



Answer Cards (Set B₁ and B₂)

5th Grade - Readiness Standard 6 - 4.NF.4b

Storage Suggestions: Copy the **Problem (Set B)** cards and **Answer (Set B)** cards in two different colors.

Store 1 set of each in a sealable bag for each pair of students.

Set B ₁	$1 \frac{1}{4}$ Set B ₁	$2 \frac{2}{5}$ Set B ₁	$5 \frac{1}{4}$ Set B ₁	$5 \frac{1}{3}$ Set B ₁
	$3 \frac{3}{5}$ Set B ₁	2 Set B ₁	6 Set B ₁	3 Set B ₁
	$1 \frac{4}{5}$ Set B ₁	$1 \frac{1}{3}$ Set B ₁	Set B ₁	Set B ₁
Set B ₂	$1 \frac{1}{4}$ Set B ₂	$2 \frac{2}{5}$ Set B ₂	$5 \frac{1}{4}$ Set B ₂	$5 \frac{1}{3}$ Set B ₂
	$3 \frac{3}{5}$ Set B ₂	2 Set B ₂	6 Set B ₂	3 Set B ₂
	$1 \frac{4}{5}$ Set B ₂	$1 \frac{1}{3}$ Set B ₂	Set B ₂	Set B ₂



Questions for Solving Word Problems

Q₁

What is the problem about?

Q₂

What do I need to find?

Q₃

What do I know?

Q₄

What can I try?

Q₅

Does my answer make sense?



Steps for Solving Word Problems

Q₁. What is the problem about?

Q₂. What do I need to find?

Q₃. What do I know?

Q₄. What can I try?

Q₅. Does my answer make sense?