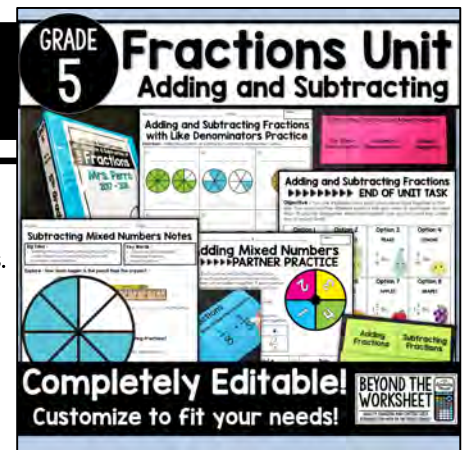


ABOUT THIS RESOURCE



Details :

This 20 day unit covers 5th Grade Multiplying and Dividing Fractions Standards. If the skills don't completely align to your state standards, that's OK because this resource is 100% editable! All content can be modified to make this unit perfect for your classroom!

Included Resources :

- Weekly warm up recording sheets
- Weekly exit ticket sheets
- Blank lesson plans
- Unit tracking pages
- Unit vocabulary sheet
- Unit pre-assessment
- Warm ups
- End of Unit Performance Task
- Partner Activity
- Traditional notes
- Fold and Flip Notes
- Practice assignments (for homework or classwork)
- A complete PDF of the unit
- An editable PPT version of the unit.
- A binder cover and spine labels

Lessons :

- Lesson 1 : Multiplying Fractions
- Lesson 2 : Multiplying Mixed Numbers
- Lesson 3 : Dividing Fractions and Whole Numbers
- Lesson 4 : Measurement Conversions

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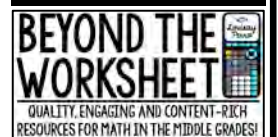


Meet the Author :

My name is Lindsay Perro and I have been an educational writer and content developer since 2009. After spending 8 years as a Middle School Math Teacher and Interventionist, I am now following my passion and focusing on creating quality educational resources to make your job easier and keep students engaged and excited about math!



Lindsay Perro



Multiplying and Dividing Fractions

►►► Unit Plan for 5th Grade Math

**17 DAY
UNIT**

LESSON	RESOURCES
Unit Prep (pgs. 6 – 12)	<ul style="list-style-type: none"> • Weekly Warm Up Sheet • Exit Ticket Template • Blank Lesson Plan Template • Unit Vocabulary Pages • Unit Pre-Assessment
1) Multiplying Fractions (pgs. 13 – 25)	<ul style="list-style-type: none"> • Four Warm Ups • Multiplying Fractions with Models Introduction • Multiplying Fractions Notes (2 pages) • Multiplying Fractions Practice Worksheet • Multiplying Fractions Word Problems Practice Worksheet • Multiplying Fractions Performance Task • Multiplying Fractions Partner Practice Activity • Multiplying Fractions Mini Assessment
2) Multiplying Mixed Numbers (pgs. 26 – 38)	<ul style="list-style-type: none"> • Four Warm Ups • Multiplying Mixed Numbers Notes • Multiplying Mixed Numbers Practice Worksheets (4 total) • Multiplying Fractions and Mixed Numbers Practice Worksheets (2 total) • Multiplying Mixed Numbers Mini Assessment
3) Dividing Fractions and Whole Numbers (pgs. 39 – 59)	<ul style="list-style-type: none"> • Four Warm Ups • Explore Fraction Division Introductory Page • Fraction Division = Multiplication Introductory Page • Dividing Fractions Notes (2 pages) • Dividing Fractions Fold and Flip Notes • Fraction Operations Fold and Flip Notes • Dividing Fractions Practice Worksheet (2 total) • Fraction Operations Mini Assessment • Fraction Operation Word Problems Mini Assessment
4) Metric Conversions (pgs. 60 – 67)	<ul style="list-style-type: none"> • Two Warm Ups • Measurement Conversions Notes • Measurement Conversions Customary Reference Sheet • Measurement Conversions Customary Practice Worksheet • Measurement Conversions Metric Reference Sheet • Measurement Conversions Metric Practice Worksheet
End of Unit (pgs. 67 – 74)	<ul style="list-style-type: none"> • End of Unit Task (3 pages) • Unit 5 Reference Sheet • Unit 5 Assessment (2 pages)

PACING CALENDAR

Unit 6 : Multiplying & Dividing Fractions

Day 10 Topic: Dividing Fractions Resources: <ul style="list-style-type: none"> L3 Warm Up 1 Explore: Dividing Fractions Fractions: Dividing = Multiplying {insert choice activity} 	Day 11 Topic: Dividing Fractions Resources: <ul style="list-style-type: none"> L3 Warm Up 2 Dividing Fractions Notes (2 pages) Dividing Fractions Practice Worksheet (worksheet one) 	Day 12 Topic: Dividing Fractions Resources: <ul style="list-style-type: none"> L3 Warm Up 3 Dividing Fractions Practice Worksheet (worksheet two)
Day 13 Topic: Dividing Fractions Resources: <ul style="list-style-type: none"> L3 Warm Up 4 Fraction Operations Fold and Flip Notes Fraction Operations Mini Assessment (one or both pages) 	Day 14 Topic: Measurement Conversions Resources: <ul style="list-style-type: none"> L4 Warm Up 1 Measurement Conversions Notes Measurement Conversions Customary Reference Sheet 	Day 15 Topic: Measurement Conversions Resources: <ul style="list-style-type: none"> L4 Warm Up 2 Measurement Conversions Practice Worksheet (worksheet one)

Unit 6 : Multiplying & Dividing Fractions

Day 1 Topic: Unit Prep Resources: <ul style="list-style-type: none"> Review Unit 5 {suggested activity – Adding and Subtracting Fractions and Mixed Numbers Stations} Unit 6 Pre Assessment 	Day 2 Topic: Multiplying Fractions Resources: <ul style="list-style-type: none"> L1 Warm Up 1 Multiplying Fractions with Models Multiplying Fractions Practice Worksheet (worksheet one). Allow them to use models 	Day 3 Topic: Multiplying Fractions Resources: <ul style="list-style-type: none"> L1 Warm Up 2 Multiplying Fractions Practice Worksheet (2 pages) Multiplying Fractions Practice Word Problem Worksheet
Day 4 Topic: Multiplying Fractions Resources: <ul style="list-style-type: none"> L1 Warm Up 3 Multiplying Fractions Practice Worksheet (worksheet two) 	Day 5 Topic: Multiplying Fractions Resources: <ul style="list-style-type: none"> L1 Warm Up 4 Multiplying Fractions Practice Worksheet (worksheet three) 	Day 6 Topic: Multiplying Mixed Numbers Resources: <ul style="list-style-type: none"> L2 Warm Up 1 Multiplying Mixed Numbers Notes Multiplying Mixed Numbers Practice Worksheet (worksheet one)

TALKING POINTS

Unit 6 : Multiplying & Dividing Fractions

Tips and Talking Points

LESSON 1 Multiplying Fractions	<ul style="list-style-type: none"> From multiplying whole numbers, students believe that multiplication makes numbers larger. Explain that, with fractions less than one, multiplication makes numbers smaller. Have them think of the multiplication symbol as the term "groups of" to help them see that they are not trying to make their number grow – but they are finding the groups of something. Misunderstandings – Some students will have been taught to "cross multiply." Occasionally you will have students who want to find a common denominator first. While it won't lead to an incorrect answer (as long as they convert correctly) it'll leave them larger numbers to multiply and a product that needs to be reduced.
LESSON 2 Multiplying Mixed Numbers	<ul style="list-style-type: none"> To help students understand why mixed numbers must be turned to improper fractions before multiplying, all them to solve a problem such as $4\frac{1}{2} \times 5\frac{3}{4}$ both ways – by first turning to an improper fraction and by simply multiplying the fractions and whole numbers. Explain why there is a difference in products (there is a difference because you cannot just find the groups of whole numbers and groups of fractions. In this case they are finding four and a half groups of five and three-fourths. The numbers must "stick together"). Misunderstandings – Even after you've provided instruction, students will still want to multiply the fractions and then multiply the whole numbers.
LESSON 3 Dividing Fractions and Mixed Numbers	<ul style="list-style-type: none"> Focus on the relationship between multiplying a whole number by a fraction (finding the part of a whole) and dividing a whole number by a fraction (finding how many of that fraction fit into the whole number). "When dividing fractions, do not cry! Flip the second fraction and multiply!"

Day 7 Topic: Multiplying Mixed Numbers Resources: <ul style="list-style-type: none"> L2 Warm Up 2 Multiplying Mixed Numbers Practice Worksheet (worksheet two) 	Day 8 Topic: Multiplying Mixed Numbers Resources: <ul style="list-style-type: none"> L2 Warm Up 3 Multiplying Mixed Numbers Practice Worksheet (worksheet three)
Day 9 Topic: Multiplying Mixed Numbers Resources: <ul style="list-style-type: none"> L2 Warm Up 4 Multiplying Fractions and Mixed Numbers Practice Worksheet (worksheet six) Multiplying Mixed Numbers Mini Assessment 	Day 10 Topic: Multiplying Mixed Numbers Resources: <ul style="list-style-type: none"> L2 Warm Up 5 Multiplying Mixed Numbers Practice Worksheet (worksheet seven)

www.beyondtheworksheet.com

Teacher Resources

14
ment
ions

- Take time to have students decide which measurement unit(s) will be acceptable for measuring different items and ensure they understand which units are for length, weight, time, etc.

Name _____ Date _____ **four**

Multiplying Fractions Warm Up

Skill : Multiplying fractions.

1) $\frac{1}{5} \times \frac{3}{10}$

2)

3) $\frac{7}{12} \times \frac{6}{7}$

4)

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EDITABLE**

Name _____ Date _____

Dividing Fractions Warm Up

Skill : Dividing whole numbers by fractions.

1) $8 \div \frac{1}{4}$

2) $9 \div \frac{7}{5}$

4) $2 \div \frac{1}{6}$

Name _____ Date _____ **one**

Measurement Conversions Warm Up

Skill : Dividing fractions and whole numbers.

1) $12 \div 2\frac{1}{2}$

2) $\frac{1}{2} \div 2$

3) $\frac{11}{12} \div 3$

4)

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

6)

Name _____ Date _____ **three**

Multiplying Mixed Numbers Warm Up

Skill : Multiplying mixed numbers.

1) $1\frac{2}{3} \times 3\frac{3}{10}$


2) $2\frac{7}{9} \times 9$

3) $4\frac{1}{10} \times 3\frac{4}{5}$

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Penna



Warm Ups

Name _____ Date _____

Multiplying Fractions with Models

Take a look :

You have used models to represent fractions and add or subtract similar model to multiply fractions.

Use a model to show the product of $\frac{1}{4} \times \frac{1}{3}$.

- Step 1 : Draw a square or fraction bar to represent one whole.

- Step 2 : Divide the shape into fourths. Shade one fourth.

Name _____ Date _____

Multiplying Mixed Numbers

Big Idea :

- Mixed numbers must be converted to improper fractions before they can be multiplied.

Key Words :

- Improper Fractions
- Mixed Numbers

Explore :

...brownies. She needs $\frac{3}{4}$ cup of chocolate chips for one tray.

...chocolate chips and she is making trays.

...ence that can be used to find out the total number of cups need to make all of the brownies.



Name _____ Date _____

Explore : Dividing Fractions

You have $\frac{1}{2}$ of a candy bar and you want to share it equally with 3 friends.

How much of the original candy bar will each of you receive?

- Draw a picture. Divide the bar in half to represent how much of the candy bar you will be sharing.
- How many pieces will that half need to be broken into? Think people will have a piece. Separate the half into that number of pieces.
- Calculate how much each person will receive by thinking about how many pieces you broke one-half into four pieces. Breaking something apart is division.

Name _____ Date _____

Dividing Fractions Notes

Big Idea :

- When dividing fractions and whole numbers, you can use the reciprocal.

Key Words :

- Reciprocal
- Quotient

Name _____ Date _____

Measurement Conversions Notes

Big Idea :

- Converting among measurements is a skill you will use for the rest of your life. Knowing when to multiply and when to divide is key!

Key Words :

- Conversion
- Customary
- Metric

Explore :

Have you ever had to measure something large with just a ruler? Have you ever heard someone say their house is just "an eighth of a mile away?" There will be many times in life where you'll find yourself needing to convert from smaller measurements to larger ones, or larger measurements to smaller ones. So, how do you do that?

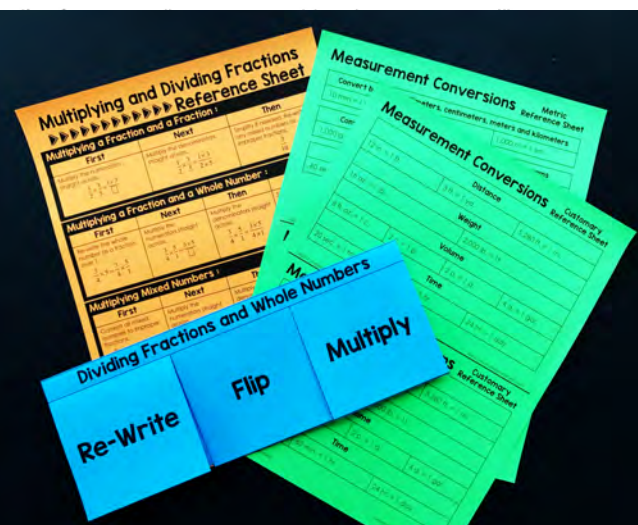
The Steps :

When converting from a smaller unit to a larger unit, you divide.

Try it :

You know that 1 foot = 12 inches.

- How many inches are in 3 feet?
- How many feet are in 36 inches?
- How many feet are in 48 inches?
- How many inches are in 6 feet?
- How many feet are in 72 inches?



...popcorn left and want to share it with 4 people.
...of the original popcorn does each person get?

Remember to turn any whole numbers into fractions by putting 1 over the whole number.

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

It's not actually have to divide at all! When dividing fractions, don't ask why! Flip the second fraction.

Remember to turn any whole numbers into fractions by putting 1 over (re-write as the reciprocal) and change the division symbol to multiplication.

$$\frac{1}{2} \div \frac{4}{1} = \frac{1}{2} \times \frac{1}{4}$$

Now it's multiply straight across and simplify if needed.

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Notes

- Write a number sentence : _____
- Solve and simplify. 42 inches = _____ feet.

Partners : _____ & _____

Score : _____

MULTIPLYING FRACTIONS

▶▶▶▶▶ PARTNER PRACTICE

Directions : Each partner will spin the spinner once. The number each partner lands on will identify which mixed numbers will be added together. If each partner spins and lands on the same number, that's ok! That mixed number can just be added to itself.

Record the mixed numbers and sums in the table on this page.

For Example : Partner one spins a 2 and partner two spins a 3. Mixed numbers 2 and 3 will be added together.

1	2	3	4
2	7	3	1



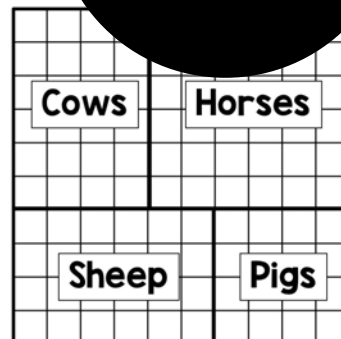
Name _____ Date _____

Multiplying Mixed Numbers

Answer the questions using the diagram of the farm.

If each square unit represents $2\frac{3}{4}$ feet, record the dimensions for each section.

- ☐ Cows
• _____ feet long _____ feet wide
- ☐ Horses
• _____ feet long _____ feet wide
- ☐ Sheep
• _____ feet long _____ feet wide



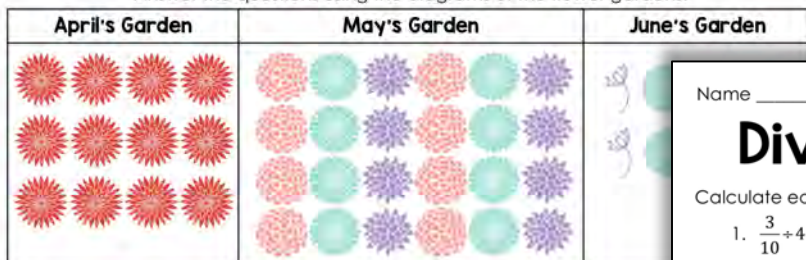
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Name _____ Date _____

Score : _____

Multiplying Fractions Practice

Answer the questions using the diagrams of the flower gardens.



- How many flowers are in April's garden?
- One half of the flowers in April's garden were planted by 5th grade students. How many flowers in April's garden were planted by 5th grade students?
- One fourth of the flowers in April's garden were planted in the

Name _____ Date _____

Score : _____

Dividing Fractions Practice

Calculate each quotient. Simplify your answer if needed.

1. $\frac{3}{10} \div 4$

2. $12 \div \frac{1}{3}$

3. $\frac{5}{6} \div 3$

4. $16 \div \frac{1}{8}$

5. $\frac{6}{7} \div 2$

6. $5 \div \frac{1}{4}$

8. $\frac{1}{2} \div 2$

9. $\frac{1}{6} \div 6$

11. $\frac{1}{3} \div 5$

12. $\frac{9}{10} \div 5$

Name _____ Date _____

Score : _____

Measurement Conversions Practice

Customary Units

Convert the given measurements to new units.

- | | | |
|----------------------|------------------------------|--------------------------|
| 1) 38 oz. to tons | 2) 64 lb. to tons | 3) 109 qt. to gallons |
| 4) 140 c. to gallons | 5) 35 yd. to feet | 6) 62 lb. to ounces |
| 7) 175 mi. to yards | 8) 430 tons to pounds | 9) 18½ gallons to quarts |
| 10) 8¼ mi. to feet | 11) 4,265 seconds to minutes | 12) 18.5 hours to days. |

line used $\frac{11}{12}$ of a bag of chocolate chips to make three dozen cookies. How much of the bag went into each batch?

in needs six cups of
scoops will he ne

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Worksheets

Name _____ Date _____ Score: _____

Multiplying and Dividing Fractions

Pre Assessment

Prior Knowledge : Find each sum or difference.

1) $\frac{1}{2} + \frac{4}{5}$ 2) $10\frac{2}{3} - 1\frac{9}{10}$ 3) $4\frac{1}{6} + 3\frac{1}{4}$ 4) $\frac{11}{12} - \frac{1}{5}$

Name _____ Date _____ Score: _____

Multiplying Fractions

Mini Assessment

Standard : 5.NF.4

1. Which of the following is another way to represent $\frac{12}{5}$?

- $12 \div 5$
- $5 \div 12$
- 12×5
- 5×12

2. Which of the following is another way to represent $\frac{1}{2} \times \frac{3}{7}$?

- $(1 \times 7) \div (2 \times 3)$
- $(1 \times 7) \times (2 \times 3)$
- $(1 \times 3) \div (2 \times 7)$
- $(1 \times 3) \times (2 \times 7)$

3. Determine the area of the rectangle. Show your work.

$\frac{7}{8}$ yd

$\frac{1}{3}$ yd

Name _____ Date _____ Score: _____

Multiplying and Dividing Fractions

END OF UNIT TASK

Objective : You are baking cookies for a party at school. Below is a list of the ingredients you will need to make one batch (approximately 30) of cookies.


All Purpose Flour	Baking Soda	Unsalted Butter	Light Brown Sugar
$2\frac{1}{4}$ cups	1 tsp	$1\frac{1}{2}$ sticks	$\frac{3}{4}$ cup
Granulated Sugar	Eggs	Pure Vanilla Extract	Semisweet Chocolate Chips
$\frac{2}{3}$ cup	2 eggs	1 tsp	12 ounces

Task :

1. You want to make $3\frac{3}{4}$ batches of cookies. How many cookies will you have when you are finished? _____ cookies

2. Complete the table to show how much of each ingredient you will need in order to make $3\frac{3}{4}$ batches.

All Purpose Flour	Baking Soda	Unsalted Butter	Light Brown Sugar



Name _____ Date _____ Score: _____

Multiplying Fractions

Performance Task

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You've been assigned a huge science project. Rather than turning in the entire project at one time, your teacher wants you to turn in pieces at a time. Your project timeline and rubric are shown in the table to the right. You have 48 days to complete the entire project.

Section	Days	Days
Topic	8	8
Materials & Directions	$\frac{1}{4}$	$\frac{1}{2}$
Experiment	$\frac{1}{2}$	$\frac{1}{4}$
Summary	$\frac{3}{16}$	$\frac{1}{8}$

1. How many days from the start of the project will each of the following parts be due if they are due in the order they are listed?

- Topic : _____
- Materials & Directions : _____

Name _____ Date _____ Score: _____

Multiplying Mixed Numbers

Mini Assessment

Standards : 5.NF.5, 5.NF.6

1. In your own words, explain what how the product compares to the original number when you multiply by a fraction less than one, versus a fraction greater than one.

1. George has 48 cookies. Marta has $\frac{3}{4}$ of the number of cookies as George. How many cookies does Marta have?

1. Aldo has $2\frac{1}{2}$ times as many cards as Marta. How many cards does Aldo have?

Name _____ Date _____ Score: _____

Multiplying and Dividing Fractions

Assessment

"I can multiply fractions and mixed numbers and divide fractions and whole numbers."

Evaluate :

1) $\frac{6}{7} \times 6\frac{2}{3}$ 2) $\frac{3}{8} \times \frac{1}{10}$ 3) $2\frac{1}{2} \times 4\frac{1}{7}$ 4) $6 + 1\frac{1}{2}$


5) $\frac{7}{8} \div 4$ 6) _____

9) $1\frac{6}{7} \div 2$ 10) _____

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Assessments

**EDITABLE
BINDER
COVER**

Unit 6 5th Grade

Unit 6
5th Grade

5th Grade MathUnit 6
5th Grade Math

STUDENT TRACKING

Name	Pre Assessment	Post Assessment	Notes

STUDENT TRACKING

[illegible]

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Tracking Sheets & Binder Labels

Multiplying and Dividing Unit Plan for 5th Grade

VOCABULARY	OBJECTIVES
<ul style="list-style-type: none"> • Conversion • Improper Fraction • Mixed Number • Product • Quotient • Reciprocal • Simplify 	<ul style="list-style-type: none"> • Extend an understanding of multiplication to fractions and numbers. • Solve real world problems involving multiplication and division of fractions and mixed numbers.

Weekly Warm Up Sheet

Name _____ Week of _____ to _____

Date: _____

Date: _____



Multiplying and Dividing Fractions Unit Plan

STANDARD(S): _____ DATE(S): _____

STUDENT MATERIALS:

- | | | | |
|--|-------------------------------------|--------------------------------------|--------------------------------|
| <input type="checkbox"/> CALCULATOR | <input type="checkbox"/> SCISSORS | <input type="checkbox"/> COMPASS | <input type="checkbox"/> _____ |
| <input type="checkbox"/> COLORED PENCILS | <input type="checkbox"/> GLUE | <input type="checkbox"/> GRAPH PAPER | <input type="checkbox"/> _____ |
| <input type="checkbox"/> RULER | <input type="checkbox"/> PROTRACTOR | <input type="checkbox"/> DRY ERASE | <input type="checkbox"/> _____ |

LESSON PROGRESSION:

Ticket

Exit Ticket

Exit Ticket

Name _____
Date _____

Multiplying and Dividing VOCABULARY

TERM	DEFINITION
Conversion	
Customary	
Improper Fraction	
Metric	
Mixed Number	
Product	

Multiplying & Dividing Fractions Unit

Lesson 1 : Multiplying Fractions

Suggested Time Frame : Four Days

Resources Included:

- Four Warm Ups
- Multiplying Fractions with Models Introduction
- Multiplying Fractions Notes (2 pages)
- Multiplying Fractions Practice Worksheet
 - Can be used for homework or classwork
- Multiplying Fractions Word Problems
 - Can be used for homework or classwork
- Multiplying Fractions Practice Worksheet
- Multiplying Fractions Practice Worksheet
- Multiplying Fractions Practice Worksheet



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Planning Pages