

# **Fraction Operations and Integer Concepts Unit Plan**

LESSON	RESOURCES
Unit Prep (pgs. 8 – 14)	<ul style="list-style-type: none"> <li>Weekly Warm Up Sheet</li> <li>Exit Tickets</li> <li>Lesson Plan Template</li> <li>Vocabulary Pages</li> <li>Unit Pre-Assessment</li> </ul>
(1) <u>Review</u> : Equivalent Fractions and Simplest Form (pgs. 15 – 22)	<ul style="list-style-type: none"> <li>Three Warm Ups</li> <li>Equivalent Fractions and Simplest Form Open Notes Page</li> <li>Equivalent Fractions and Simplest Form Practice</li> <li>Equivalent Fractions Flip Book</li> </ul>
(2) <u>Review</u> : Adding and Subtracting Fractions and Mixed Numbers (pgs. 23 – 32)	<ul style="list-style-type: none"> <li>Three Warm Ups</li> <li>Adding &amp; Subtracting Fractions and Mixed Numbers Notes</li> <li>Adding Fractions and Mixed Numbers Practice</li> <li>Subtracting Fractions and Mixed Numbers Practice</li> <li>Adding and Subtracting Fractions Steps Organizer</li> <li>Adding and Subtracting Mixed Numbers Steps Organizer.</li> <li>Adding and Subtracting Fractions and Mixed Numbers Word Problems Practice</li> </ul>
(3) <u>Review</u> : Multiplying Fractions and Mixed Numbers (pgs. 33 – 40)	<ul style="list-style-type: none"> <li>Three Warm Ups</li> <li>Multiplying Fractions and Mixed Numbers Notes</li> <li>Multiplying Fractions and Mixed Numbers Steps Organizer</li> <li>Multiplying Fractions and Mixed Numbers Practice</li> <li>Multiplying Fractions and Mixed Numbers Word Problems Practice</li> </ul>
(4) Dividing Fractions and Mixed Numbers by Fractions (pgs. 41 – 55)	<ul style="list-style-type: none"> <li>Five Warm Ups</li> <li>Dividing Fractions and Mixed Numbers Notes</li> <li>Dividing Fractions and Mixed Numbers Practice</li> <li>Multiplying and Dividing Fractions and Mixed Numbers Steps Organizer</li> <li>Fraction Operations Mini Book</li> <li>Operations with Fractions and Mixed Numbers Quiz</li> </ul>



# Fraction Operations and Integer Concepts Unit Plan



LESSON	RESOURCES
(5) Understanding Integers (pgs. 56 – 65)	<ul style="list-style-type: none"><li>• Three Warm Ups</li><li>• Understanding Integers Notes</li><li>• Understanding Integers Fold and Flip Notes</li><li>• Understanding Integers Practice</li><li>• Understanding Integers Number Line Practice</li></ul>
(6) Absolute Value (pgs. 66 – 75)	<ul style="list-style-type: none"><li>• Three Warm Ups</li><li>• Absolute Value Notes</li><li>• Absolute Value Fold and Flip Notes</li><li>• Absolute Value Practice</li></ul>
(7) Plotting in a coordinate plane (pgs. 76 – 87)	<ul style="list-style-type: none"><li>• Three Warm Ups</li><li>• Coordinate Planes Notes (2 pages)</li><li>• Coordinate Planes Fold and Flip Notes</li><li>• Coordinate Planes Practice</li><li>• Coordinate Planes Real World Practice</li></ul>
End of Unit (pgs. 88 – 92)	<ul style="list-style-type: none"><li>• Study Guide</li><li>• Unit Exam</li></ul>

# Fraction Operations and Integer Concepts



## UNIT PREP



SUGGESTED TIME FRAME : ONE DAY

### Resources Included:

- Weekly Warm Up Sheet
  - Copy weekly for each student. This provides them with an organized place to keep their warm ups each day and makes it simple for grading.
- Exit Tickets
  - This sheet includes 5 exit tickets that can easily be cut or torn by students and turned in each day. Provide students with a single problem to solve or question to respond to at the end of each class.
  - Exit ticket problems are not included since classes work at different paces.
- Lesson Plan
  - A blank lesson plan template is included for you to print and record your daily lesson(s).
- Vocabulary
  - Two versions of the vocabulary sheet are included. One pre-filled with words from the unit and one blank.
- Pre-Assessment
  - A short one page assessment

# LESSON ONE

## Equivalent Fractions and Simplest Form

SUGGESTED TIME FRAME : TWO DAYS - QUICK REVIEW LESSON

### Resources Included:

- Three Warm Ups
- Equivalent Fractions and Simplest Form Open Notes Page
- Equivalent Fractions and Simplest Form Practice – can be used for classwork or homework
- Equivalent Fractions Flip Book

### Essential Skills :

- Understand how to use multiplication and division to identify equivalent fractions.
- Fluently reduce fractions to their simplest form.



## LESSON TWO



# Adding and Subtracting Fractions and Mixed Numbers

SUGGESTED TIME FRAME : THREE DAYS - REVIEW LESSON

### Resources Included:

- Three Warm Ups
- Adding & Subtracting Fractions and Mixed Numbers Notes
- Adding Fractions and Mixed Numbers Practice – can be used for homework or classwork
- Subtracting Fractions and Mixed Numbers Practice – can be used for homework or classwork
- Adding and Subtracting Fractions Steps Organizer.
- Adding and Subtracting Mixed Numbers Steps Organizer.
- Adding and Subtracting Fractions and Mixed Numbers Word Problems Practice – can be used for homework or classwork

### Essential Skills :

- Add and subtract fractions and mixed numbers with unlike denominators.



# LESSON THREE

## Multiplying Fractions and Mixed Numbers

SUGGESTED TIME FRAME : TWO DAYS - REVIEW LESSON

### Resources Included:

- Three Warm Ups
- Multiplying Fractions and Mixed Numbers Notes
- Multiplying Fractions and Mixed Numbers Steps Organizer
- Multiplying Fractions and Mixed Numbers Practice – can be used for homework or classwork.
- Multiplying Fractions and Mixed Numbers Word Problems Practice – can be used for homework or classwork.

### Essential Skills :

- Multiply fractions and mixed numbers by fractions and whole numbers.

# LESSON FOUR

## Dividing Fractions and Mixed Numbers

SUGGESTED TIME FRAME : FOUR TO FIVE DAYS

### Resources Included:

- Five Warm Ups
- Dividing Fractions and Mixed Numbers Notes
- Dividing Fractions and Mixed Numbers Practice – can be used for homework or classwork
- Multiplying and Dividing Fractions and Mixed Numbers Steps Organizer
- Fraction Operations Mini Book
- Operations with Fractions and Mixed Numbers Quiz

### Essential Skills :

- Add, subtract, multiply and divide fractions and mixed numbers.

# LESSON FIVE

# Understanding Integers

SUGGESTED TIME FRAME : ONE TO TWO DAYS - QUICK REVIEW LESSON

## Resources Included:

- Three Warm Ups
- Understanding Integers Notes
- Understanding Integers Fold and Flip Notes
- Understanding Integers Practice – can be used for homework or classwork
- Understanding Integers Number Line Practice – can be used for homework or classwork

## Essential Skills :

- Understand a rational number as a point on the number line.
- Extend number line diagrams and coordinate axes to represent points on the line and in the plane with negative number coordinates.
- Use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.





## LESSON SIX



# Absolute Value

SUGGESTED TIME FRAME : ONE TO TWO DAYS - QUICK REVIEW LESSON

### Resources Included:

- Three Warm Ups
- Absolute Value Notes
- Absolute Value Fold and Flip Notes
- Absolute Value Practice – can be used for homework or classwork

### Essential Skills :

- Understand ordering and absolute value of rational numbers.

## LESSON SEVEN

# Coordinate Planes

SUGGESTED TIME FRAME : ONE TO TWO DAYS - QUICK REVIEW LESSON

### Resources Included:

- Three Warm Ups
- Coordinate Planes Notes (2 pages)
- Coordinate Planes Fold and Flip Notes
- Coordinate Planes Practice – can be used for homework or classwork.
- Coordinate Planes Real World Practice – can be used for homework or classwork.

### Essential Skills :

- Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane.
- Extend number line diagrams and coordinate axes to represent points on the line and in the plane with negative number coordinates.

# Fraction Operations and Integer Concepts



## END OF UNIT



SUGGESTED TIME FRAME : ONE DAY

### Resources Included:

- Study Guide
- Final Unit Exam (3 pages)
  - The third page is just “bare” problems. Leave it out if you'd rather not have these basic problems.

Name \_\_\_\_\_ Date \_\_\_\_\_

# Equivalent Fractions And Simplest Form Notes

Equivalent Fractions are :

Simplest Form is :

Finding Equivalent Fractions :

Identifying Simplest Form :

Name \_\_\_\_\_ Date \_\_\_\_\_

# Adding and Subtracting Mixed Numbers

## STEPS ORGANIZER

SUBTRACTION	First :
	Second :
	Next :
	Then :
Like Denominators	Unlike Denominators

Name \_\_\_\_\_ Date \_\_\_\_\_

# Adding and Subtracting Fractions and Mixed Number

## WORD PROBLEMS PRACTICE

- Marcus spent  $2\frac{2}{3}$  hours on his science project and  $1\frac{11}{12}$  hours on a math project over the last two weeks. How much time did he spend altogether on the projects?
- Melissa has  $7\frac{1}{2}$  cups of sugar. She will use  $3\frac{2}{5}$  cups in a cookie recipe and  $2\frac{7}{8}$  cups in a cake recipe. How many cups of sugar will she have left?
- Piper has  $22\frac{3}{4}$  pounds of stones to spread around her flower garden. If she spread  $16\frac{8}{10}$  pounds today, how much does she have left to spread tomorrow?

Name \_\_\_\_\_ Date \_\_\_\_\_

# Multiplying Fractions and Mixed Numbers

## STEPS ORGANIZER

Step 1: Change mixed numbers to improper fractions.

Step 2: Cross reduce if possible.

Step 3: Multiply the numerators.

Step 4: Multiply the denominators.

Step 5: Simplify the fraction.

Name \_\_\_\_\_ Date \_\_\_\_\_

# Dividing Fractions and Mixed Numbers

## WARM UP

Skill : Adding fractions and mixed numbers.

- Find the sum. Simplify your answer if necessary.  
 $4\frac{1}{2} + 6\frac{1}{5}$
- Find the sum. Simplify your answer if necessary.
- Find the sum. Simplify your answer if necessary.  
 $2\frac{1}{2} + 9\frac{6}{10}$

Name \_\_\_\_\_ Date \_\_\_\_\_

# Dividing Fractions and Mixed Numbers Notes

Dividing fractions and whole numbers :

- If there is a mixed number, turn it into an improper fraction.
- Turn the whole number into a fraction by placing it over the number \_\_\_\_\_.
- Find the reciprocal of the divisor. The divisor is the \_\_\_\_\_ number.
- Replace the division symbol with a \_\_\_\_\_ symbol.
- Multiply the numerator by the numerator, and the denominator by the denominator.

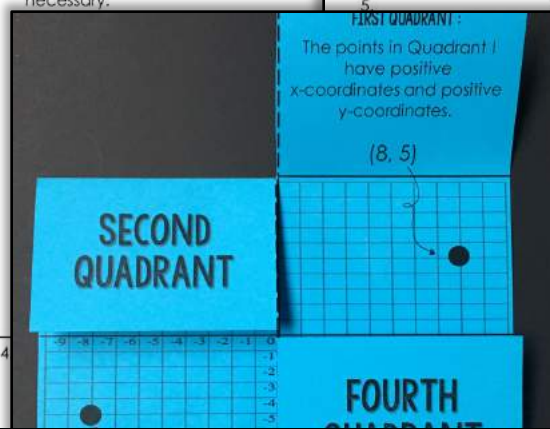
## Dividing Fractions and Whole Numbers Guided Practice :

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_





Name \_\_\_\_\_ Date \_\_\_\_\_

# Understanding Integers

## NOTES

What are integers?

How are integers represented on a number line?

Integers in the real world

POSITIVE INTEGERS

NEGATIVE INTEGERS

Name \_\_\_\_\_ Date \_\_\_\_\_

# Understanding Integers

## PRACTICE

For numbers 1 - 4, circle the greatest number in each set.

1. 4, 5, 8, 3, 7, 2

2. -9, -10, -11, -14, -3, -8, -2, -7

3. -5, -3, -2, -1, -6, 5

4. 5, 6, 8, 9, 11, 12, 14

For numbers 5 - 8, represent each statement as an integer.

5. A \$50 check is deposited into the bank.

6. The temperature rises 15 degrees.

7. Four inches of snow melted.

8. A baby elephant gained 45 pounds.

For numbers 9 - 14, plot the given integers on the number line.

10. 2

# ABSOLUTE VALUE

IS DEFINED AS :

The distance a number is from zero.

-4 is four units from zero

The absolute value of -4 is 4

LOOKS LIKE :

The symbol for absolute value is two straight lines with the number you want to find the absolute value of being inside the lines.

$|-10|$  = "The absolute value of negative ten."

EXAMPLES :

$|5| = 5$

$|-10| = 10$

Name \_\_\_\_\_ Date \_\_\_\_\_

# Coordinate Planes

## NOTES

What is a coordinate plane?

What does it look like?

A look at the quadrants :

Name \_\_\_\_\_ Date \_\_\_\_\_

# Coordinate Planes

## REAL WORLD PRACTICE

This coordinate plane represents the layout of a small town. Each point is a different landmark.

A. Elementary School \_\_\_\_\_

B. Middle School \_\_\_\_\_

C. Movie Theater \_\_\_\_\_

D. Grocery Store \_\_\_\_\_

E. Playground \_\_\_\_\_

F. Dog Park \_\_\_\_\_

1. Write the coordinates of each landmark.

2. Each line on the grid represents a street. Draw a path from the Dog Park to the Elementary School.

Name \_\_\_\_\_ Date \_\_\_\_\_

# Fraction Operations and Integer Concepts Study Guide

## OPERATIONS WITH FRACTIONS

ADDING AND SUBTRACTING	MULTIPLYING	DIVIDING
1. Change mixed numbers to improper fractions. 2. Find the least common denominator of the fractions. 3. Re-write each fraction using the common denominator. Don't forget to change the numerator as well, by multiplying by the same factor used to take that denominator to the LCD. 4. Add or subtract the numerators and keep the denominators the same.	1. Turn any mixed numbers into improper fractions. 2. Multiply the numerator by the numerator. 3. Multiply the denominator by the denominator. 4. Simplify your answer.	1. Turn any mixed numbers into improper fractions. 2. Find the reciprocal of the divisor. The divisor is the second number. 3. Replace the division symbol with a multiplication symbol. 4. Multiply the numerator by the numerator. 5. Multiply the denominator by the denominator. 6. Simplify your answer.

zero.

EQUIVALENT FRACTIONS :

When you multiply the numerator and denominator of a fraction by the same number, the resulting fraction is equivalent to the original.