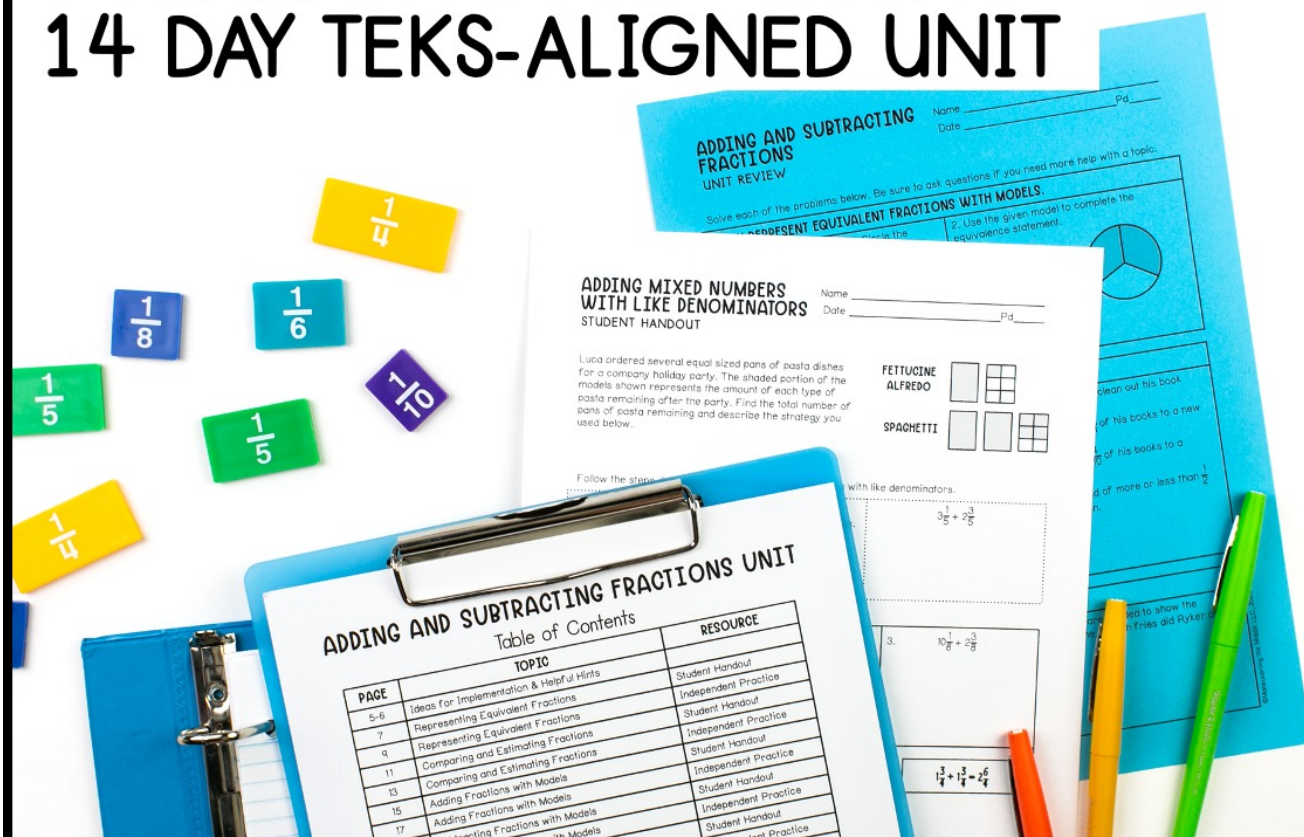


# learning focus:

- ✓ add and subtract fractions less than one using models
- ✓ add and subtract fractions less than one with unlike denominators
- ✓ add and subtract mixed numbers with like and unlike denominators in real-world situations

# ADDING AND SUBTRACTING FRACTIONS UNIT

## 14 DAY TEKS-ALIGNED UNIT



# ADDING AND SUBTRACTING FRACTIONS



a 14 day TEKS-aligned unit  
TEKS: 5.3H, 5.3K

**ready-to-go, scaffolded  
student materials**

## ADDING AND SUBTRACTING FRACTIONS UNIT

### Table of Contents

PAGE	TOPIC	RESOURCE
5-6	Ideas for Implementation & Helpful Hints	
7	Representing Equivalent Fractions	Student Handout
9	Representing Equivalent Fractions	Independent Practice
11	Comparing and Estimating Fractions	Student Handout
13	Comparing and Estimating Fractions	Independent Practice
15	Adding Fractions with Models	Student Handout
17	Adding Fractions with Models	Independent Practice
19	Subtracting Fractions with Models	Student Handout
21	Subtracting Fractions with Models	Independent Practice
23	Adding Fractions with Unlike Denominators	Student Handout
25	Adding Fractions with Unlike Denominators	Independent Practice
27	Subtracting Fractions with Unlike Denominators	Student Handout
29	Subtracting Fractions with Unlike Denominators	Independent Practice
31	Adding and Subtracting Fractions Quiz	Quiz
33	Adding Mixed Numbers with Like Denominators	Student Handout
35	Adding Mixed Numbers with Like Denominators	Independent Practice
37	Adding Mixed Numbers with Unlike Denominators	Student Handout
39	Adding Mixed Numbers with Unlike Denominators	Independent Practice
41	Subtracting Mixed Numbers with Like Denominators	Student Handout
43	Subtracting Mixed Numbers with Like Denominators	Independent Practice
45	Subtracting Mixed Numbers with Unlike Denominators	Student Handout
47	Subtracting Mixed Numbers with Unlike Denominators	Independent Practice
49	Adding and Subtracting Mixed Numbers Quiz	Quiz
51	Applying Addition and Subtraction of Fractions	Student Handout
53	Applying Addition and Subtraction of Fractions	Independent Practice
55	Adding and Subtracting Fractions Unit Review	Review
59	Adding and Subtracting Fractions Unit Test	Test
63	Adding and Subtracting Fractions Unit Answer Key	Answer Key

TEKS

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# ADDING AND SUBTRACTING FRACTIONS



a 14 day TEKS-aligned unit  
TEKS: 5.3H, 5.3K

## student friendly + real-world application

scaffolded concepts

**SUBTRACTING MIXED NUMBERS WITH LIKE DENOMINATORS** Name \_\_\_\_\_ Date \_\_\_\_\_ Pd \_\_\_\_\_  
STUDENT HANDOUT

Similar to adding mixed numbers, when subtracting mixed numbers, you can consider the whole number parts and fraction parts to find the difference. Use the steps to complete the example.

**SUBTRACTING MIXED NUMBERS WITH LIKE DENOMINATORS**

- Consider the values of the \_\_\_\_\_ and regroup the first mixed number if necessary.
- Subtract \_\_\_\_\_ values.
- Subtract \_\_\_\_\_ amounts.
- Simplify if needed.

1. Armando needs to solve  $2\frac{1}{4} - 1\frac{3}{4}$  and draws an area model to represent  $2\frac{1}{4}$  as shown below.

a. Armando subtracts the whole numbers and then tries to subtract the fraction amounts. Can he use the model of  $\frac{1}{4}$  to subtract  $\frac{3}{4}$ ? Explain.

b. How could you adjust the model to rewrite the first mixed number in the subtraction?

When subtracting mixed numbers, you may need to regroup the first value before solving as described below.

WHEN TO REGROUP MIXED NUMBERS	HOW TO REGROUP MIXED NUMBERS
<p>SMALLER FRACTION      LARGER FRACTION</p> <p><math>2\frac{1}{4} - 1\frac{3}{4}</math></p>	<ol style="list-style-type: none"> <li>Borrow 1 from the whole number. Rewrite whole as a fraction with the same denominator.</li> <li>Add the 1 you borrowed to the fraction.</li> </ol> <p>Example: <math>5\frac{1}{3} =</math> _____</p>

In #1-3, rewrite the subtraction problem by regrouping the first mixed number. Do not

1. $5\frac{1}{8} - 3\frac{5}{8}$	2. $4\frac{2}{9} - 1\frac{5}{9}$	3. $7\frac{2}{5} - 3\frac{3}{5}$
----------------------------------	----------------------------------	----------------------------------

**SUBTRACTING FRACTIONS WITH UNLIKE DENOMINATORS** Name \_\_\_\_\_ Date \_\_\_\_\_ Pd \_\_\_\_\_  
INDEPENDENT PRACTICE

Find the difference on each card below. Six of the cards have a solution greater than  $\frac{1}{2}$ . Unscramble the letters of those six cards to create a secret code.

$2\frac{1}{4} - \frac{1}{8}$	$1 - \frac{5}{9}$	$\frac{4}{5} - \frac{1}{10}$
I	S	N
$3 - \frac{3}{7}$	$\frac{14}{15} - \frac{1}{5}$	$\frac{11}{12} - \frac{2}{3}$
W	E	A

Tanner put  $\frac{8}{9}$  tablespoon of caramel sauce on his ice cream. Dylan used  $\frac{1}{3}$  tablespoon less than Tanner. How much caramel sauce did Dylan put on his ice cream?

Ziva walked a total of 2 miles during the first three days of the week. She walked  $\frac{2}{5}$  mile on Sunday and  $\frac{1}{4}$  mile on Monday. How many miles did she walk on Tuesday?

SECRET CODE: \_\_\_\_\_ ©Maneuvering the Middle LLC, 2023

self-checking practice

# ADDING AND SUBTRACTING FRACTIONS



a 14 day TEKS-aligned unit  
TEKS: 5.3H, 5.3K

## unit study guide + assessments

- ✓ quizzes
- ✓ editable unit test

### ADDING AND SUBTRACTING FRACTIONS QUIZ

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

Answer the questions below. Be sure to show your work.

1. Which of the following equivalence statements are represented by the model shown at the right?

I.  $\frac{5}{15} = \frac{1}{3}$     II.  $\frac{1}{5} = \frac{5}{15}$

a. I only  
b. II only  
c. I and II

2. Mrs. Cohen asked her students to write two fractions. Which student(s) wrote a...

**LAVON**    **MIA**

$\frac{11}{12} > \frac{7}{8}$      $\frac{2}{7} < \frac{5}{7}$

Answer the questions below. Be sure to...

3. Draw a model to solve  $\frac{1}{4} + \frac{3}{5}$ .

5. Shai and Darrell shared a basket of tortilla chips that each person ate.

**SHAI** \_\_\_\_\_  
**DARRELL** \_\_\_\_\_

What fraction of the tortilla chips did Shai eat?  
a.  $\frac{5}{12}$     b.  $\frac{5}{9}$

### ADDING AND SUBTRACTING FRACTIONS UNIT REVIEW

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

Solve each of the problems below. Be sure to ask questions if you need more help with a topic.

#### I CAN REPRESENT EQUIVALENT FRACTIONS WITH MODELS.

1. Four students drew a model. Circle the names of the two students whose models represent equivalent fractions.

**LUCA**    **KENZIE**    **ELIAS**

2. Use the given model to complete the equivalence statement.

#### I CAN COMPARE AND ESTIMATE

3. Circle the name(s) of the students who wrote a correct inequality statement.

**JOHN**    **BROOKE**    **RAE**

$\frac{3}{7} < \frac{5}{14}$      $\frac{3}{7} + \frac{1}{3} > \frac{1}{2}$      $\frac{5}{6}$

#### I CAN ADD FRACTIONS WITH MODELS

5. Ryker and Byron shared a basket of French Fries each person ate. How many fries did they eat altogether?

**RYKER** \_\_\_\_\_  
**BYRON** \_\_\_\_\_

### SUBTRACTING FRACTIONS WITH MODELS STUDENT HANDOUT

Name **Answer Key** \_\_\_\_\_  
Date \_\_\_\_\_ Pd \_\_\_\_\_

Nadia hosted an appreciation luncheon for the teachers at Riverbend Elementary. After the luncheon, there was  $\frac{1}{2}$  of the turtle cheesecake remaining and  $\frac{1}{3}$  of the chocolate cheesecake remaining. Use the models shown below to answer a-c.

a. Which flavor has more left over?  
**Turtle cheesecake**

b. Nadia wants to find the difference in the amounts remaining. What changes need to be made to the models before she can subtract the values?  
**She needs to split the models into the same number of parts.**

c. Use the models to find the difference.

$\frac{1}{2} - \frac{1}{3} = \frac{1}{6}$

Similar to addition, fractions must be renamed with a common denominator before subtracting. Follow the steps outlined below to use area models to find a common denominator and visualize the difference of fractions with unlike denominators.

#### SUBTRACTING FRACTIONS WITH AREA MODELS

1. Create an area model for each fraction. (Note: Use vertical lines for one model and horizontal lines for the other.)

2. Divide each fraction model by the other fraction's denominator.

3. Find the equivalent fractions represented and subtract the fraction amounts.

For #1-3, use the area models to rename the fractions with a common denominator and find the difference.

1.  $\frac{1}{2} - \frac{2}{5} = \frac{5}{10} - \frac{4}{10} = \frac{1}{10}$

2.  $\frac{4}{5} - \frac{1}{3} = \frac{12}{15} - \frac{5}{15} = \frac{7}{15}$

3.  $\frac{5}{7} - \frac{1}{2} = \frac{10}{14} - \frac{7}{14} = \frac{3}{14}$

answer keys included