Get Ready

Name: _____ Date: _____

Identify Multiples

The first five **multiples** of 2 are 2, 4, 6, 8, and 10.
Each multiple is the product of 2 and a natural number.
$2 \times 1 = 2$ $2 \times 2 = 4$ $2 \times 3 = 6$
$2 \times 4 = 8$ $2 \times 5 = 10$

Natural numbers are 1, 2, 3, and so on.

1. List the first three multiples of each of the following numbers.

a) 3 **b)** 5

c) 8 **d)** 10

2. Circle the following number(s) that are not a multiple of 6. Show how you know.

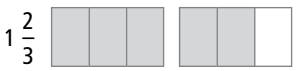
6 48 18 40 24

Write Fractions

$\frac{3}{4}$ is a fraction, sometimes called a **proper fraction**.
Its numerator is less than its denominator.

$\frac{5}{3}$ is an **improper fraction**.
Its numerator is greater than its denominator.

$1\frac{2}{3}$ is a **mixed number**.
It is made up of a whole number and a fraction.



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

$\frac{5}{3} = 5 \div 3$
$= 1$, with 2 of 3 parts left over
$= 1\frac{2}{3}$

3. Write an improper fraction and a mixed number for each diagram.

a)

b)

4. Draw a diagram to represent each of the following. Identify each item as a proper fraction, an improper fraction, or a mixed number.

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

b) $\frac{8}{5}$

Name: _____ Date: _____

Identify and Order Unit Fractions

Unit fractions have a numerator of 1. Some examples of unit fractions are $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, and $\frac{1}{5}$.

5. Identify the unit fraction shown by each fraction strip.

a)

b)

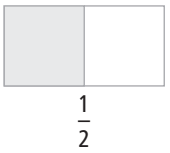
c)

d)

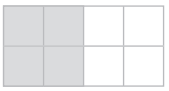
6. List the unit fractions in #5 in order from least to greatest. Explain how you know.

Equivalent Fractions

Equivalent fractions represent the same part of the whole or group. $\frac{4}{8}$ and $\frac{1}{2}$ are equivalent fractions.



$\frac{1}{2}$



$\frac{4}{8}$

An equivalent fraction is in lowest terms when the numerator and denominator have no common factors other than 1.

$$\frac{8}{12} \overset{\div 4}{=} \frac{2}{3}$$

$\frac{2}{3}$ is in lowest terms.

7. Name the fractions. Then circle the pairs that are equivalent.

a)

b)

c)

d)

8. Name the fraction shaded in the diagram. Draw a diagram to show an equivalent fraction, then write the equivalent fraction.

9. Circle the fractions that are *not* in lowest terms. Show how you know.

a) $\frac{2}{4}$ **b)** $\frac{3}{8}$

c) $\frac{3}{15}$ **d)** $\frac{6}{9}$

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7.1 Common Denominators

MathLinks 7, pp. 230–236

Key Ideas Review

Choose from the following terms to complete the statements in #1 to #3, then answer each question.

equivalent	common denominator	multiples

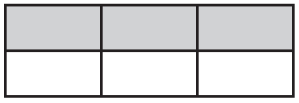
1. To determine a common denominator, you can use _____. For example,

Multiples of 2 are 2, 4, 6, 8, …

Multiples of 3 are 3, 6, 9, …

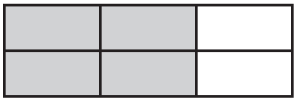
So, a common denominator for $\frac{1}{2}$ and $\frac{2}{3}$ is _____.

2. Use a diagram to visually determine a _____ _____. For example,



3 of the 6 parts are shaded

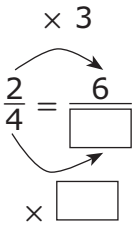
$\frac{1}{2} = \frac{3}{\square}$

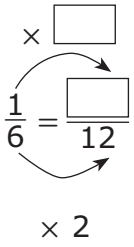


4 of the 6 parts are shaded

$\frac{2}{3} = \frac{4}{\square}$

3. To write fractions with common denominators, determine _____ fractions. For example,

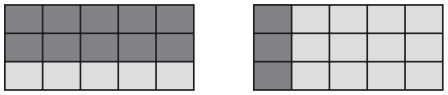




Name: _____ **Date:** _____

Practise and Apply

4. Use the folded papers shown to determine a common denominator and equivalent fractions for this pair of fractions.

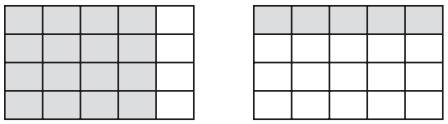


Common denominator: _____

Equivalent fractions:

$\frac{2}{3} = \frac{\square}{\square}$ and $\frac{1}{5} = \frac{\square}{\square}$

5. Look at the diagrams to determine a common denominator and equivalent fractions for this pair of fractions.



Common denominator: _____

Equivalent fractions:

$\frac{4}{5} = \frac{\square}{\square}$ and $\frac{1}{4} = \frac{\square}{\square}$

6. Use a diagram to determine a common denominator for the pair of fractions. Then write equivalent fractions using the common denominator.

$\frac{1}{5}$ and $\frac{5}{6}$

7. Use multiples to determine a common denominator for the pair of fractions. Then, write equivalent fractions using the common denominator.

$\frac{5}{6}$ and $\frac{3}{8}$

8. Determine a common denominator for the pair of fractions. Circle the larger fraction. Show your thinking.

$\frac{2}{5}, \frac{8}{25}$

9. Fill in the blanks to make equivalent fractions.

a) $\frac{1}{3} = \frac{\square}{6} = \frac{\square}{9} = \frac{5}{\square} = \frac{11}{\square}$

b) $\frac{4}{32} = \frac{\square}{16} = \frac{3}{\square} = \frac{\square}{8} = \frac{\square}{72}$

10. Determine a common denominator for this set of fractions. Use the common denominator to write an equivalent fraction for each fraction. Then, list the fractions in order from least to greatest.

$\frac{1}{6}, \frac{2}{4}, \frac{1}{3}, \frac{2}{3}, \frac{3}{4}, \frac{1}{2}$

Name: _____ Date: _____

7.2 Add and Subtract Fractions With Unlike Denominators

MathLinks 7, pp. 237–244

Key Ideas Review

For #1 to #3, unscramble the letters to form a word that correctly completes the statement.

1. Different denominators mean the parts are different _____.
ZSESI

2. **a)** To add or subtract fractions with different denominators, use _____ or _____ to show parts of the same size.
ODMELS GDIRAMSA

b) Another method is to use a _____ denominator.
MOCMON

3. When adding or subtracting fractions, _____ by comparing the fractions to 0, $\frac{1}{2}$, or 1.
MSTAEETI

Practise and Apply

4. Write the addition statement shown by the diagrams. Estimate and then add.

5. Add. Write your answers in lowest terms.

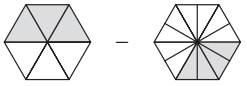
a) $\frac{5}{9} + \frac{1}{3}$

b) $\frac{3}{8} + \frac{1}{4}$

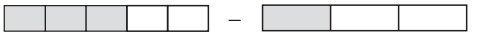
c) $\frac{1}{4} + \frac{1}{5}$

6. Write the subtraction statements shown by the diagrams. Estimate and then subtract.

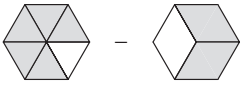
a)



b)



c)



Name: _____ **Date:** _____

7. Subtract. Write your answers in lowest terms.

a) $\frac{5}{8} - \frac{1}{4}$

b) $\frac{5}{6} - \frac{1}{2}$

c) $\frac{11}{15} - \frac{3}{5}$

8. By the end of the week, Carol wants to have $\frac{2}{3}$ of a novel read. By Friday she has read $\frac{1}{2}$ of the novel. How much does she still have to read to reach her goal? Show your work.

9. Jessie and To share a salad. Jessie eats $\frac{1}{4}$ of the salad. To eats $\frac{1}{5}$ of the salad.

a) Altogether, how much of the salad do Jessie and To eat?

b) What fraction of the salad is left?

c) Is more or less than $\frac{1}{2}$ the salad left? Show your thinking.

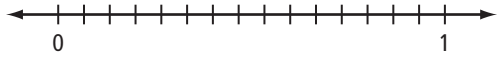
10. Kyle and his sister have $\frac{3}{4}$ of a pizza to share. Kyle's sister eats $\frac{1}{3}$ of it and Kyle eats the rest.

a) Who ate more pizza? Show your thinking.

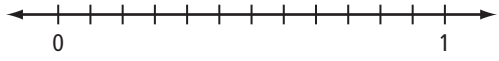
b) Draw a diagram to show what fraction of the whole pizza Kyle ate.

11. Use the number lines provided to find each answer. Show your thinking.

a) $\frac{7}{15} + \frac{1}{3}$



b) $\frac{2}{3} - \frac{1}{4}$



Name: _____ Date: _____

7.3 Add Mixed Numbers

MathLinks 7, pp. 245–251

Key Ideas Review

For #1 to #3, select all of the steps from column B that complete the statement in column A. Write the related letters in order. Steps may be used more than once.

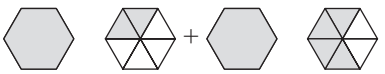
A	B
1. When adding mixed numbers with like denominators, _____.	**a)** add the fractions
2. When adding mixed numbers with unlike denominators, _____.	**b)** determine a common denominator
3. Check your answer with a(n) _____.	**c)** add the whole numbers
	d) estimate

Practise and Apply

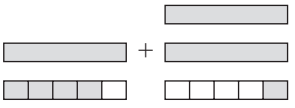
4. Write each addition statement shown, then solve.

a)

b)



c)



5. Add. Write your answers in lowest terms. Check your answers using estimation. Show your work.

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

b) $1\frac{1}{4} + 2\frac{1}{4}$

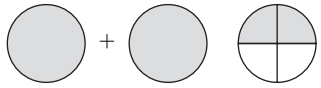
c) $2\frac{1}{10} + 3\frac{3}{10}$

d) $4\frac{2}{5} + 3\frac{4}{5}$

Name: _____ **Date:** _____

6. Write each addition statement shown, then solve.

a) 

b) 

c) 

7. Add. Write your answer in lowest terms. Show your work.

a) $2\frac{1}{6} + 3\frac{1}{2}$

b) $3\frac{5}{9} + \frac{1}{3}$

c) $2\frac{5}{12} + 3\frac{5}{6}$

d) $4\frac{5}{6} + 1\frac{3}{4}$

8. Evgueni watched television for $3\frac{3}{4}$ hours on Saturday and for $2\frac{1}{3}$ hours on Sunday. How many hours did he spend watching television on the weekend? Show your work. Check your answer using estimation.

9. Penny is a member of a running club. The first part of the club's running route is $4\frac{3}{5}$ km and the second part is $5\frac{1}{2}$ km. How long is the running route in total? Show your work. Check your answer using estimation.

10. At a fundraiser dinner for a soccer team, $6\frac{2}{3}$ dozen white buns and $3\frac{5}{6}$ dozen brown buns were eaten. How many dozen buns were eaten in total? Check your answer using estimation. Show your work.

Name: _____ Date: _____

7.4 Subtract Mixed Numbers

MathLinks 7, pp. 252–259

Key Ideas Review

Choose from the following terms to complete the statements in #1 to #3.

whole	fractions	unlike	estimate	regrouped	improper

1. **a)** When subtracting mixed numbers with like denominators, you can subtract the _____ numbers and subtract the _____.

b) When subtracting mixed numbers with _____ denominators, you can also determine a common denominator for the fractions

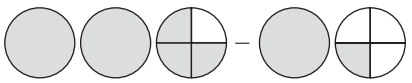
2. To check your answer, compare to a(n) _____.

3. Sometimes, mixed numbers need to be _____ or changed to _____ fractions before subtracting.

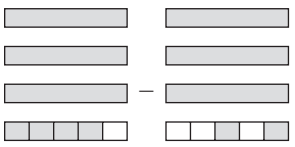
Practise and Apply

4. Write a subtraction statement to represent each diagram, then subtract.

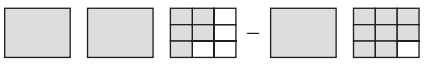
a)



b)



c)



5. Subtract. Write your answers in lowest terms. Check your answers using estimation. Show your work.

a) $5\frac{4}{5} - 3\frac{2}{5}$

b) $3\frac{7}{9} - 3\frac{6}{9}$

c) $6\frac{2}{3} - 2\frac{1}{3}$

d) $12\frac{5}{6} - 10\frac{1}{6}$

Name: _____ **Date:** _____

6. Determine each difference. Write your answers in lowest terms. Show your work.

a) $3\frac{1}{4} - 1\frac{1}{2}$

b) $5\frac{3}{10} - 2\frac{4}{5}$

c) $4\frac{1}{3} - 2\frac{3}{4}$

d) $4\frac{7}{9} - 3\frac{2}{3}$

7. A punch recipe calls for $3\frac{1}{4}$ cans of orange juice. You have one can in the freezer and $\frac{1}{2}$ can in the fridge. How many more cans do you need? Include diagrams to show your thinking.

8. Claudia has $2\frac{1}{2}$ pages to write for a science report. She has completed $1\frac{3}{4}$ pages. How many more pages does she need to write? Show your work.

9. Justin likes to get 7 h of sleep a night. He woke up after sleeping for $5\frac{1}{3}$ h. How many more hours does he need to get the amount of sleep he likes? Show your work.

10. Lars ran $6\frac{2}{3}$ laps of the track at his school. Renata ran $8\frac{1}{4}$ laps.

a) How much farther did Renata run? Show your work.

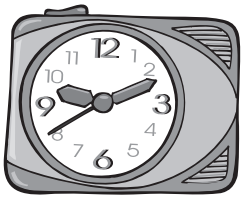
b) Check your answer using estimation.

Name: _____ Date: _____

Link It Together

1. **a)** Fill in the blanks to complete the table.

Minutes	Fraction of an Hour	Lowest Terms
Example, 30	$\frac{30}{60}$	$\frac{1}{2}$
	$\frac{50}{60}$	
		$\frac{3}{4}$
40		
	$\frac{20}{60}$	
		$\frac{1}{4}$
5		



b) This table converts _____ to fractions of an _____.

2. Kim works 40 h per week at her Monday-to-Friday job. The amount of time she has already worked this week is listed on the time sheet below.

Name: Kim

Day	Hours	Minutes
Monday	7	15
Tuesday	8	10
Wednesday	6	45
Thursday	8	30
Friday		

a) Change the minutes to fractions of an hour. Then find the total number of hours that Kim has worked so far this week. Show your work.

b) How much time does Kim need to work on Friday to complete 40 h? Show your work.

Name: _____ **Date:** _____

Vocabulary Link

Draw a line to match each example in column A with the correct term in column B. Then, find and circle each term in the word search.

A	B
1. $2\frac{3}{5}$	**a)** equivalent fractions
2. _____ of 4 = 4, 8, 12, 16 ...	**b)** improper fraction
3. $\frac{3}{4}$	**c)** common denominator
4. $\frac{22}{8}$	**d)** mixed number
5. $\frac{1}{4}, \frac{2}{3}$: 12	**e)** multiples
6. $\frac{3}{4} = \frac{6}{8}$	**f)** proper fraction

N	Z	R	O	Y	X	P	F	Q	U	W	Q	U	E	C	I	L	Q	O	E
E	I	M	P	R	O	P	E	R	F	R	A	C	T	I	O	N	J	N	Q
W	W	U	Z	I	U	F	P	E	C	G	L	K	K	H	I	S	O	T	U
M	U	Y	Z	K	O	A	X	U	M	Z	H	S	J	V	I	I	G	C	A
T	B	W	B	M	I	X	E	D	N	U	M	B	E	R	T	M	R	G	L
M	V	Y	Y	J	J	I	R	D	R	N	U	M	Y	C	Q	D	K	U	A
D	S	L	M	M	T	R	M	Y	M	U	A	T	A	F	F	Y	H	I	L
P	E	Q	U	I	V	A	L	E	N	T	F	R	A	C	T	I	O	N	S
A	Z	J	L	J	B	Y	Q	T	O	V	F	R	J	M	M	E	X	B	E
A	M	U	L	T	I	P	L	Y	M	R	X	T	O	W	G	M	W	L	L
K	H	N	I	B	F	P	T	J	E	A	G	N	F	D	G	X	W	F	P
J	V	Q	P	R	I	F	I	P	U	E	T	T	Y	I	F	C	N	R	I
Q	L	T	L	U	U	B	O	O	J	P	O	S	H	X	T	Z	V	P	T
J	U	W	E	K	O	R	Z	B	W	B	E	I	F	I	T	R	G	X	L
X	U	W	S	Z	P	N	K	A	X	A	O	E	Q	D	L	F	Q	U	U
C	O	M	M	O	N	F	R	A	C	T	I	O	N	E	Q	S	U	C	M
O	Q	H	X	F	V	P	I	C	E	C	U	R	R	Y	L	W	E	L	O
X	C	O	M	M	O	N	D	E	N	O	M	I	N	A	T	O	R	C	N
F	I	N	G	E	R	P	K	T	O	F	L	E	M	C	A	T	I	N	S