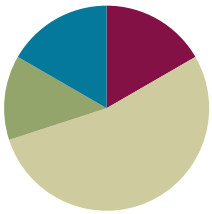
Lesson 10

Objective: Add fractions with sums greater than 2.

Suggested Lesson Structure



Fluency Practice	(10 minutes)
Application Problem	(8 minutes)
Concept Development	(32 minutes)
Student Debrief	(10 minutes)
Total Time	**(60 minutes)**

Fluency Practice (10 minutes)

- Sprint: Add and Subtract Whole Numbers and Ones with Fraction Units **4.NF.3c** (10 minutes)

Sprint: Add and Subtract Whole Numbers and Ones with Fraction Units (10 minutes)

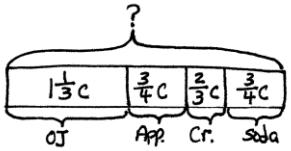
Materials: (S) Add and Subtract Whole Numbers and Ones with Fraction Units Sprint

Note: This Sprint strengthens prerequisite skills for today's fractional work with sums greater than 2.

Application Problem (8 minutes)

To make punch for the class party, Mrs. Lui mixed $1\frac{1}{3}$ cups orange juice, $\frac{3}{4}$ cup apple juice, $\frac{2}{3}$ cup cranberry juice, and $\frac{3}{4}$ cup lemon-lime soda. Mixed together, how many cups of punch does the recipe make? (Extension: Each serving is 1 cup. How many batches of this recipe does Mrs. Lui need to serve her 20 students?)

T: Let's read the problem together.
S: (Read chorally.)
T: Can you draw something? Use the RDW process to solve the problem. (Circulate while students work.)
T: Alexis, will you tell the class about your solution?
S: I noticed that Mrs. Lui uses thirds and fourths when measuring. I added the like units together first. Then, I added the unlike units last to find the answer.



$1\frac{1}{3} + \frac{3}{4} + \frac{2}{3} + \frac{3}{4}$
$= (1\frac{1}{3} + \frac{2}{3}) + (\frac{3}{4} + \frac{3}{4})$
$= 2 + 1\frac{2}{4}$
$= 3\frac{2}{4}$
$= 3\frac{1}{2}$

The recipe makes $3\frac{1}{2}$ cups of punch.

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T: Say the addition sentence for the units of thirds.
S: $1\frac{1}{3}+\frac{2}{3}=2$.
T: 2 what?
S: 2 cups.
T: Say your addition sentence for the units of fourths.
S: 3 fourths + 3 fourths = 1 and 1 half.
T: 1 and 1 half what?
S: 1 and 1 half cups.
T: How do I finish solving this problem?
S: Add 2 cups + 1 and 1 half cups.
T: Tell your partner your final answer as a sentence.
S: Mrs. Lui's recipe makes 3 and 1 half cups of punch.

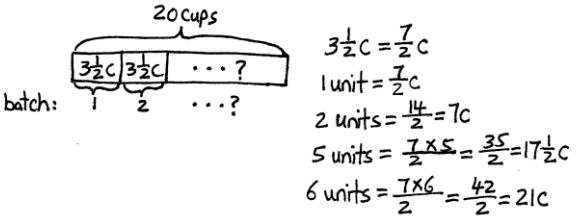
If time allows, ask students to share strategies for solving the extension question.

Note: This Application Problem reviews Topic B skills, particularly adding unlike fractions from numbers between 0 and 2, in preparation for today's addition of fractions with sums greater than 2.

NOTES ON MULTIPLE MEANS OF REPRESENTATION:

Every so often during fraction work, students discuss the need for like units when adding or subtracting. Remind them that this is also true with whole numbers. When they add or subtract whole numbers, they add or subtract ones with ones, tens with tens, hundreds with hundreds, etc. It is very important for students to clearly understand that fractions follow the same rules as whole numbers. Like units are always necessary to add or subtract.

Extension:



$3\frac{1}{2}C=\frac{7}{2}C$
1 unit $=\frac{7}{2}C$
2 units $=\frac{14}{2}=7C$
5 units $=\frac{7\times5}{2}=\frac{35}{2}=17\frac{1}{2}C$
6 units $=\frac{7\times6}{2}=\frac{42}{2}=21C$

Mrs. Lui needs 6 batches of this recipe to serve 20 students, and she will have some left over.

Concept Development (32 minutes)

Materials: (S) Personal white board

T: (Post expressions A, B, and C on the board.) Look at the three expressions on the board. Discuss with your partner how they are similar and how they are different.

A: $2\frac{1}{5}+1\frac{1}{5}$ B: $2\frac{1}{5}+1\frac{1}{2}$ C: $2\frac{4}{5}+1\frac{1}{2}$

S: Each of the expressions adds whole numbers plus fractional units. → The fractions in expression A have like units, fifths. → The fractional units are different in B and C. → Both A and B will result in an answer between 3 and 4. The sum for expression C will be between 4 and 5.

NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

Throughout this lesson, students are asked to work with fraction equations and understand how each expression within the equation progresses to the next. Have English language learners who share a first language sit together to comfortably discuss the analysis of the fraction equalities.

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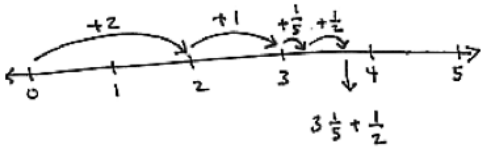
Problem 1



T: Read expression B.

S: 2 and $\frac{1}{5}$ + 1 and $\frac{1}{2}$.

T: Discuss with your partner if the following equation is true. (Write expressions as shown below.)

$$2\frac{1}{5}+1\frac{1}{2}$$
$$=2+\frac{1}{5}+1+\frac{1}{2}$$
$$=3+\frac{1}{5}+\frac{1}{2}$$
$$=3+\left(\frac{1}{5}+\frac{1}{2}\right)$$

S: (Discuss and find the expression that is true using the commutative and associative properties.)

$$2\frac{1}{5}+1\frac{1}{2}$$
$$=2+\frac{1}{5}+1+\frac{1}{2}$$
$$=3+\left(\frac{1}{5}+\frac{1}{2}\right)$$
$$=3+\left(\frac{1}{5}\times\frac{2}{2}\right)+\left(\frac{1}{2}\times\frac{5}{5}\right)$$
$$=3+\frac{2}{10}+\frac{5}{10}$$
$$=3\frac{7}{10}$$

T: Can we add $\frac{1}{5}+\frac{1}{2}$ without renaming the fractions?

S: No, we need to have like units to add. → We can change fifths and halves to tenths.

T: Yes. We can rename $\frac{1}{2}$ as an equivalent fraction with 10 as the denominator.

T: Say the multiplication sentence for renaming $\frac{1}{5}$ to tenths.

S: $\frac{1}{5}\times\frac{2}{2}=\frac{2}{10}$.

T: Say the multiplication sentence for renaming $\frac{1}{2}$ to tenths.

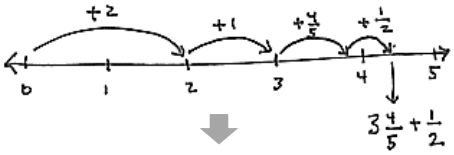
S: $\frac{1}{2}\times\frac{5}{5}=\frac{5}{10}$.

T: What is our new addition sentence with like units?

S: $3+\frac{2}{10}+\frac{5}{10}=3\frac{7}{10}$.

T: Look at the equations I wrote. (The equations found below the number line.) Discuss with your partner each of the equalities from top to bottom.

S: (Discuss.)



Problem 2: $2\frac{4}{5}+1\frac{1}{2}$

T: Discuss with your partner how expression C is the same as and different from expression B.

S: (Discuss.)

T: Share your thoughts.

S: The sum of the fractional units will be greater than 1 this time.

T: Let's compare them on the number line.

T: (Go through the process quickly, generating each equation. Omit recording the multiplication step for finding equivalent fractions, as shown in the example to the right. Allow 1–2 minutes for students to study these equations.)

$$2\frac{4}{5}+1\frac{1}{2}$$
$$=3\frac{4}{5}+\frac{1}{2}$$
$$=3\frac{8}{10}+\frac{5}{10}$$
$$=3\frac{13}{10}$$
$$=3\frac{10}{10}+\frac{3}{10}$$
$$=4\frac{3}{10}$$

T: If you are ready to find equivalent fractions mentally, do so. If you need to find equivalent fractions by writing the multiplication step, do so.

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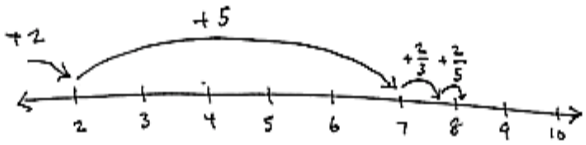
Problem 3: $2\frac{2}{3} + 5\frac{2}{5}$

$\_\_\_\_ < 2\frac{2}{3} + 5\frac{2}{5} < \_\_\_\_$



T: (Write the above problem on the board.) The sum will be between which two numbers? Discuss this question with your partner.

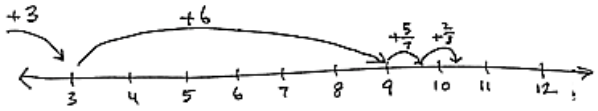
S: It's hard to know, because 5 and $\frac{2}{5}$ is really close to 5 and $\frac{2}{6}$. → One way to think about it is that $\frac{2}{6}$ is the same as $\frac{1}{3}$. $\frac{2}{3}$ plus $\frac{1}{3}$ is 1. → 2 + 5 + 1 equals 8, but fifths are larger than sixths. That means the answer must be between 8 and 9 but kind of close to 8.

T: Try solving this problem with your partner. (Post the equations shown to the right.)

$$2\frac{2}{3} + 5\frac{2}{5}$$
$$= 7 + \frac{2}{3} + \frac{2}{5}$$
$$= 7\frac{2}{3} + \frac{2}{5}$$
$$= 7\frac{10}{15} + \frac{6}{15}$$
$$= 7\frac{16}{15}$$
$$= 7\frac{15}{15} + \frac{1}{15}$$
$$= 8\frac{1}{15}$$

Problem 4: $3\frac{5}{7} + 6\frac{2}{3}$

$\_\_\_\_ < 3\frac{5}{7} + 6\frac{2}{3} < \_\_\_\_$



T: (Write the problem on the board.) The sum will be between which two numbers? Discuss this question with your partner.

S: It's greater than 9. → $\frac{5}{7}$ and $\frac{2}{3}$ are both greater than $\frac{1}{2}$, so the answer must be between 10 and 11. → $\frac{5}{7}$ only needs $\frac{2}{7}$ to be 1, and $\frac{2}{3}$ is much more than $\frac{2}{7}$. So, I agree, the answer will be between 10 and 11.

T: Take 2 minutes to solve this problem collaboratively with your partner. (Post the equations shown to the right.)

$$3\frac{5}{7} + 6\frac{2}{3}$$
$$= 9\frac{5}{7} + \frac{2}{3}$$
$$= 9\frac{15}{21} + \frac{14}{21}$$
$$= 9\frac{29}{21}$$
$$= 9\frac{21}{21} + \frac{8}{21}$$
$$= 10\frac{8}{21}$$

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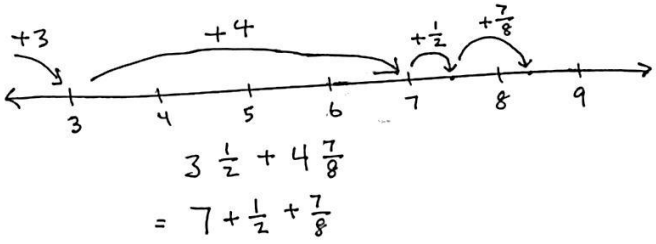
Problem 5: $3\frac{1}{2} + 4\frac{7}{8}$



_____ $< 3\frac{1}{2} + 4\frac{7}{8} <$ _____

T: (Write the problem on the board.) Discuss with your partner what unit you will use to add the fractional parts. (Allow 1 minute to discuss.)

T: Julia and Curtis, you disagree. Julia, what is your choice?

S: I'm just going to use sixteenths. It's easy for me just to multiply the denominators to find a like unit.

T: Curtis, how is your strategy different?

MP.3

S: Eighths are easier for me because I only have to change the $\frac{1}{2}$ into $\frac{4}{8}$.

T: You have 2 minutes to solve the problem. Rename by using either sixteenths or eighths for like units.

S: (Work.)

Method 1

$3\frac{1}{2} + 4\frac{7}{8} =$

$7\frac{1}{2} + \frac{7}{8} = 7\frac{4}{8} + \frac{7}{8}$

$= 7\frac{11}{8}$

$= 7\frac{8}{8} + \frac{3}{8}$

$= 8\frac{3}{8}$

Method 2

$3\frac{1}{2} + 4\frac{7}{8} =$

$7\frac{1}{2} + \frac{7}{8} = 7\frac{8}{16} + \frac{14}{16}$

$= 7\frac{22}{16}$

$= 7\frac{16}{16} + \frac{6}{16}$

$= 8\frac{6}{16}$

$= 8\frac{3}{8}$

Allow students two minutes to work together. Though students should strive to simplify their answers, both choices of unit yield an equivalent and correct sum, regardless of the fractions being simplified. Post the equations shown above.

Problem 6: $15\frac{5}{6} + 7\frac{9}{10}$

Allow students to solve the last problem. Again, note that there are two methods for finding like units. As students work, have two pairs come to the board and solve the problems using different units, highlighting that both methods result in the same solution.

It is worth pointing out that, if this were a problem about time, we might want to keep our final fraction as sixtieths in Method 1. The answer might be 23 hours and 44 minutes.

Method 1

$15\frac{5}{6} + 7\frac{9}{10}$

$= 22\frac{5}{6} + \frac{9}{10}$

$= 22\frac{50}{60} + \frac{54}{60}$

$= 22\frac{104}{60}$

$= 22\frac{60}{60} + \frac{44}{60}$

$= 23\frac{11}{15}$

Method 2

$15\frac{5}{6} + 7\frac{9}{10}$

$= 22\frac{5}{6} + \frac{9}{10}$

$= 22\frac{25}{30} + \frac{27}{30}$

$= 22\frac{52}{30}$

$= 22\frac{30}{30} + \frac{22}{30}$

$= 23\frac{11}{15}$

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Problem Set (10 minutes)

Students should do their personal best to complete the Problem Set within the allotted 10 minutes. For some classes, it may be appropriate to modify the assignment by specifying which problems they work on first. Some problems do not specify a method for solving. Students should solve these problems using the RDW approach used for Application Problems.

NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

If students finish early, have them solve the problem using more than one method for finding like units. They might also draw their solutions on the number line to prove the equivalence of different units. Drawings can be shared with the rest of the class to clarify confusion that others may have about the relationship between different methods.

Student Debrief (10 minutes)

Lesson Objective: Add fractions with sums greater than 2.

The Student Debrief is intended to invite reflection and active processing of the total lesson experience.

Invite students to review their solutions for the Problem Set. They should check work by comparing answers with a partner before going over answers as a class. Look for misconceptions or misunderstandings that can be addressed in the Debrief. Guide students in a conversation to debrief the Problem Set and process the lesson.

Any combination of the questions below may be used to lead the discussion.

T: Please take two minutes to check your answers with your partner. Do not change any of your answers. (Allow time for students to work.)

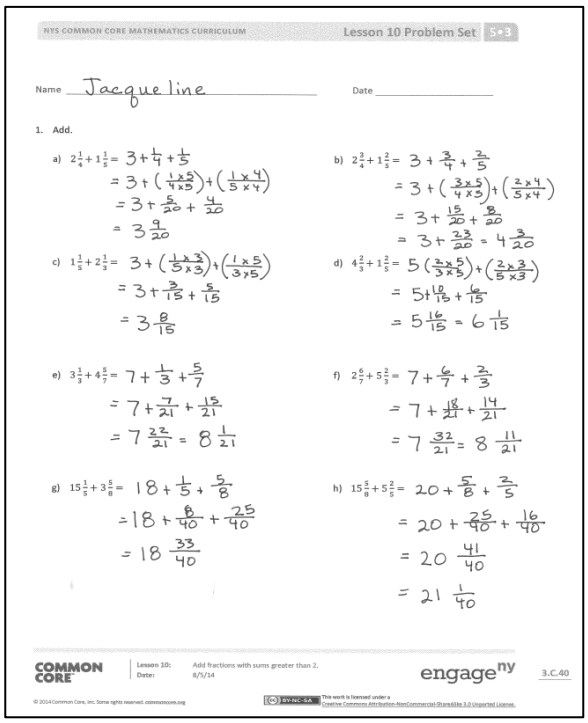
T: I will say the addition problem. Will you please share your answers out loud in response? Problem 1 (a), 2 and 1 fourth + 1 and 1 fifth =…?

S: 3 and 9 twentieths. (Continue with the remainder of the Problem Set.)

T: Take the next two minutes to discuss with your partner any observations you had while completing this Problem Set. What do you notice? (Circulate as students discuss. Listen for conversations that can be shared with the whole class.)

T: Myra, can you share what you noticed happening across the page?

S: Sure. The rows going across shared the same units. Problem 1 (a) and (b) had units of fourths and fifths, and the like units are twentieths.


NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 10 Problem Set 5•3

Name Jacqueline Date

1. Add.

a) $2\frac{1}{4}+1\frac{1}{5}= 3+\frac{1}{4}+\frac{1}{5}$
$= 3+\left(\frac{1\times5}{4\times5}\right)+\left(\frac{1\times4}{5\times4}\right)$
$= 3+\frac{5}{20}+\frac{4}{20}$
$= 3\frac{9}{20}$

b) $2\frac{3}{4}+1\frac{2}{5}= 3+\frac{3}{4}+\frac{2}{5}$
$= 3+\left(\frac{3\times5}{4\times5}\right)+\left(\frac{2\times4}{5\times4}\right)$
$= 3+\frac{15}{20}+\frac{8}{20}$
$= 3+\frac{23}{20}= 4\frac{3}{20}$

c) $1\frac{1}{3}+2\frac{1}{5}= 3+\left(\frac{1\times3}{5\times3}\right)+\left(\frac{1\times5}{3\times5}\right)$
$= 3+\frac{3}{15}+\frac{5}{15}$
$= 3\frac{8}{15}$

d) $4\frac{2}{3}+1\frac{2}{5}= 5\left(\frac{2\times5}{3\times5}\right)+\left(\frac{2\times3}{5\times3}\right)$
$= 5+\frac{10}{15}+\frac{6}{15}$
$= 5\frac{16}{15}= 6\frac{1}{15}$

e) $3\frac{1}{3}+4\frac{5}{7}= 7+\frac{1}{3}+\frac{5}{7}$
$= 7+\frac{7}{21}+\frac{15}{21}$
$= 7\frac{22}{21}= 8\frac{1}{21}$

f) $2\frac{6}{7}+5\frac{2}{3}= 7+\frac{6}{7}+\frac{2}{3}$
$= 7+\frac{18}{21}+\frac{14}{21}$
$= 7\frac{32}{21}= 8\frac{11}{21}$

g) $15\frac{1}{5}+3\frac{5}{8}= 18+\frac{1}{5}+\frac{5}{8}$
$= 18+\frac{8}{40}+\frac{25}{40}$
$= 18\frac{33}{40}$

h) $15\frac{5}{8}+5\frac{2}{5}= 20+\frac{5}{8}+\frac{2}{5}$
$= 20+\frac{25}{40}+\frac{16}{40}$
$= 20\frac{41}{40}$
$= 21\frac{1}{40}$

COMMON CORE Lesson 10: Add fractions with sums greater than 2. Date: 8/5/14 engage^ny 3.C.40

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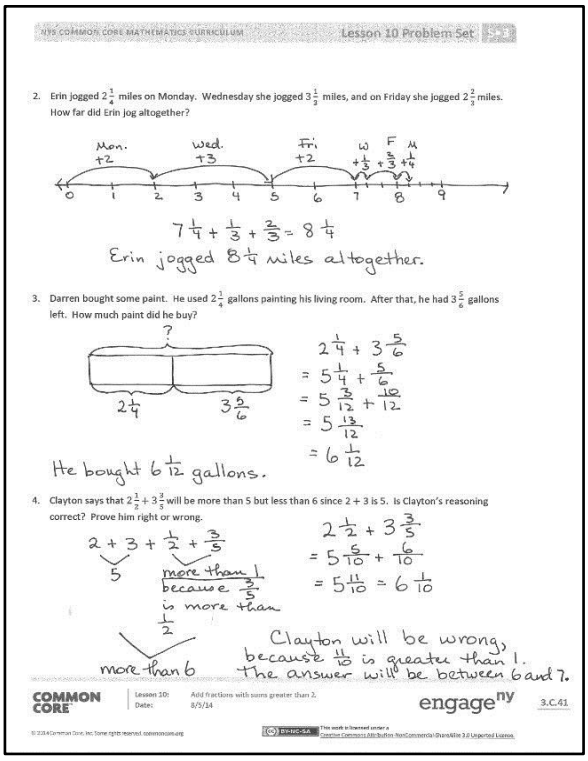
T: Victor, what did you see in the right column?

S: On all of the problems in the right column, the sum of the fraction was greater than 1. In Problem 1(h) for instance, the answer was 20 and 41 fortieths. 41 fortieths is a fraction greater than 1, so
I had to change it into a mixed number and add that to the whole number 20. So, my final answer was 21 and 1 fortieth.

T: Share with your partner how you realize when the fraction allows you to make a new whole. (Allow one minute for conversation.)

S: When the top number of the fraction is greater than the bottom number, I know. → I look at the relationship between the numerator and the denominator. If the numerator is greater, I change it to a mixed number. → The denominator tells us the number of parts in one whole. So, if the numerator is greater, the fraction is greater than one.

T: What about Clayton's reasoning in Problem 4? Discuss your thoughts with your partner.


NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 10 Problem Set 5•3

2. Erin jogged $2\frac{1}{4}$ miles on Monday. Wednesday she jogged $3\frac{1}{3}$ miles, and on Friday she jogged $2\frac{3}{3}$ miles. How far did Erin jog altogether?

Mon. +2 Wed. +3 Fri. +2 W +1/3 F +3/3 M +1/4

$7\frac{1}{4} + \frac{1}{3} + \frac{3}{3} = 8\frac{1}{4}$

Erin jogged $8\frac{1}{4}$ miles altogether.

3. Darren bought some paint. He used $2\frac{1}{4}$ gallons painting his living room. After that, he had $3\frac{5}{6}$ gallons left. How much paint did he buy?

$2\frac{1}{4} + 3\frac{5}{6} = 5\frac{1}{4} + \frac{5}{6} = 5\frac{3}{12} + \frac{10}{12} = 5\frac{13}{12} = 6\frac{1}{12}$

He bought $6\frac{1}{12}$ gallons.

4. Clayton says that $2\frac{1}{2} + 3\frac{3}{5}$ will be more than 5 but less than 6 since 2 + 3 is 5. Is Clayton's reasoning correct? Prove him right or wrong.

$2 + 3 + \frac{1}{2} + \frac{3}{5}$ — 5; more than 1 because $\frac{3}{5}$ is more than $\frac{1}{2}$; more than 6

$2\frac{1}{2} + 3\frac{3}{5} = 5\frac{5}{10} + \frac{6}{10} = 5\frac{11}{10} = 6\frac{1}{10}$

Clayton will be wrong, because $\frac{11}{10}$ is greater than 1. The answer will be between 6 and 7.

COMMON CORE | Lesson 10: Add fractions with sums greater than 2. Date: 8/5/14 | engage^ny 3.C.41

Exit Ticket (3 minutes)

After the Student Debrief, instruct students to complete the Exit Ticket. A review of their work will help with assessing students' understanding of the concepts that were presented in today's lesson and planning more effectively for future lessons. The questions may be read aloud to the students.

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A

Number Correct: _____

Add and Subtract Whole Numbers and Ones with Fraction Units

1.	$3 + 1 =$	
2.	$3 + \frac{1}{2} =$	
3.	$3\frac{1}{2} + 1 =$	
4.	$3 - 1 =$	
5.	$3\frac{1}{2} - 1 =$	
6.	$4 - 2 =$	
7.	$4\frac{1}{2} - 2 =$	
8.	$5 - 2 =$	
9.	$5\frac{1}{3} - 2 =$	
10.	$5\frac{2}{3} - 2 =$	
11.	$5\frac{2}{3} + 2 =$	
12.	$6 + 2 =$	
13.	$6 + \frac{3}{4} =$	
14.	$6\frac{3}{4} + 2 =$	
15.	$6\frac{3}{4} - 2 =$	
16.	$6\frac{3}{4} - 3 =$	
17.	$6\frac{3}{4} - 4 =$	
18.	$6\frac{3}{4} - 6 =$	
19.	$6\frac{3}{4} - \frac{3}{4} =$	
20.	$2\frac{5}{6} + 3 =$	
21.	$2\frac{1}{6} + 3 =$	
22.	$2\frac{5}{6} + 7 =$	
23.	$3\frac{5}{6} + 7 =$	
24.	$7\frac{5}{6} + 3 =$	
25.	$10\frac{5}{6} - 3 =$	
26.	$10\frac{5}{6} - 7 =$	
27.	$3 + \frac{4}{5} + 2 =$	
28.	$5 + \frac{7}{8} + 4 =$	
29.	$7 + \frac{4}{5} - 2 =$	
30.	$9 + \frac{5}{12} - 5 =$	
31.	$7 + \frac{1}{5} + \frac{1}{5} + 2 =$	
32.	$7 + \frac{2}{5} + 2 =$	
33.	$7 + \frac{2}{5} + 2 + \frac{2}{5} =$	
34.	$7\frac{2}{5} + 2\frac{2}{5} =$	
35.	$6 + \frac{1}{3} + 1 + \frac{1}{3} =$	
36.	$6\frac{1}{3} + 1\frac{1}{3} =$	
37.	$6 + \frac{2}{3} - 1 =$	
38.	$6\frac{2}{3} - 1\frac{1}{3} =$	
39.	$6\frac{2}{3} - 1\frac{2}{3} =$	
40.	$3 + \frac{4}{7} + 1 + \frac{2}{7} =$	
41.	$3\frac{4}{7} + 1\frac{2}{7} =$	
42.	$7\frac{4}{5} - 2\frac{3}{5} =$	
43.	$7\frac{4}{5} - 2\frac{2}{5} =$	
44.	$13\frac{7}{9} - 7\frac{5}{9} =$	

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B

Number Correct: _____

Improvement: _____

Add and Subtract Whole Numbers and Ones with Fraction Units

1.	$2 + 1 =$	
2.	$2 + \frac{1}{2} =$	
3.	$2\frac{1}{2} + 1 =$	
4.	$2 - 1 =$	
5.	$2\frac{1}{2} - 1 =$	
6.	$5 - 2 =$	
7.	$5\frac{1}{2} - 2 =$	
8.	$6 - 2 =$	
9.	$6\frac{1}{3} - 2 =$	
10.	$6\frac{2}{3} - 2 =$	
11.	$6\frac{2}{3} + 2 =$	
12.	$7 + 2 =$	
13.	$7 + \frac{3}{4} =$	
14.	$7\frac{3}{4} + 2 =$	
15.	$7\frac{3}{4} - 2 =$	
16.	$7\frac{3}{4} - 3 =$	
17.	$7\frac{3}{4} - 4 =$	
18.	$7\frac{3}{4} - 7 =$	
19.	$7\frac{3}{4} - \frac{3}{4} =$	
20.	$3\frac{5}{6} + 2 =$	
21.	$3\frac{1}{6} + 2 =$	
22.	$3\frac{5}{6} + 6 =$	
23.	$4\frac{5}{6} + 6 =$	
24.	$6\frac{5}{6} + 4 =$	
25.	$10\frac{5}{6} - 4 =$	
26.	$10\frac{5}{6} - 6 =$	
27.	$4 + \frac{4}{5} + 2 =$	
28.	$6 + \frac{7}{8} + 3 =$	
29.	$6 + \frac{4}{5} - 2 =$	
30.	$9 + \frac{5}{12} - 4 =$	
31.	$6 + \frac{1}{5} + \frac{1}{5} + 2 =$	
32.	$6 + \frac{2}{5} + 2 =$	
33.	$6 + \frac{2}{5} + 2 + \frac{2}{5} =$	
34.	$6\frac{2}{5} + 2\frac{2}{5} =$	
35.	$5 + \frac{1}{3} + 1 + \frac{1}{3} =$	
36.	$5\frac{1}{3} + 1\frac{1}{3} =$	
37.	$7 + \frac{2}{3} - 1 =$	
38.	$7\frac{2}{3} - 1\frac{1}{3} =$	
39.	$7\frac{2}{3} - 1\frac{2}{3} =$	
40.	$5 + \frac{4}{7} + 1 + \frac{2}{7} =$	
41.	$5\frac{4}{7} + 1\frac{2}{7} =$	
42.	$6 + \frac{4}{5} - 2\frac{3}{5} =$	
43.	$6\frac{4}{5} - 2\frac{3}{5} =$	
44.	$13\frac{7}{9} - 6\frac{5}{9} =$	

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Name _____ Date _____

1. Add.

a. $2\frac{1}{4}+1\frac{1}{5}=$

b. $2\frac{3}{4}+1\frac{2}{5}=$

c. $1\frac{1}{5}+2\frac{1}{3}=$

d. $4\frac{2}{3}+1\frac{2}{5}=$

e. $3\frac{1}{3}+4\frac{5}{7}=$

f. $2\frac{6}{7}+5\frac{2}{3}=$

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g. $15\frac{1}{5}+3\frac{5}{8}=$

h. $15\frac{5}{8}+5\frac{2}{5}=$

2. Erin jogged $2\frac{1}{4}$ miles on Monday. Wednesday, she jogged $3\frac{1}{3}$ miles, and on Friday, she jogged $2\frac{2}{3}$ miles. How far did Erin jog altogether?

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3. Darren bought some paint. He used $2\frac{1}{4}$ gallons painting his living room. After that, he had $3\frac{5}{6}$ gallons left. How much paint did he buy?

4. Clayton says that $2\frac{1}{2} + 3\frac{3}{5}$ will be more than 5 but less than 6 since $2 + 3$ is 5. Is Clayton's reasoning correct? Prove him right or wrong.

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Name _____ Date _____

Add.

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

2. $4\frac{5}{7} + 3\frac{3}{4} =$

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Name _____ Date _____

1. Add.

a. $2\frac{1}{2} + 1\frac{1}{5} =$

b. $2\frac{1}{2} + 1\frac{3}{5} =$

c. $1\frac{1}{5} + 3\frac{1}{3} =$

d. $3\frac{2}{3} + 1\frac{3}{5} =$

e. $2\frac{1}{3} + 4\frac{4}{7} =$

f. $3\frac{5}{7} + 4\frac{2}{3} =$

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g. $15\frac{1}{5} + 4\frac{3}{8} =$

h. $18\frac{3}{8} + 2\frac{2}{5} =$

2. Angela practiced piano for $2\frac{1}{2}$ hours on Friday, $2\frac{1}{3}$ hours on Saturday, and $3\frac{2}{3}$ hours on Sunday. How much time did Angela practice piano during the weekend?

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3. String A is $3\frac{5}{6}$ meters long. String B is $2\frac{1}{4}$ meters long. What's the total length of both strings?

4. Matt says that $5 - 1\frac{1}{4}$ will be more than 4, since 5 – 1 is 4. Draw a picture to prove that Matt is wrong.

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