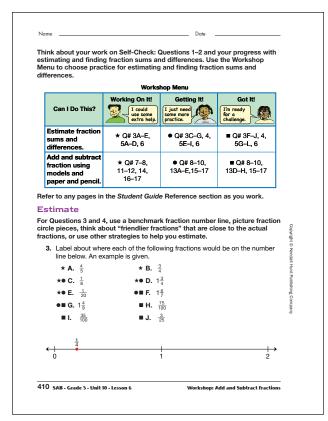


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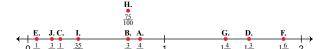
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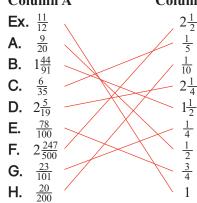
#### **Student Activity Book**

# Find Fraction Sums and Differences (SAB pp. 409–419) Questions 1–17

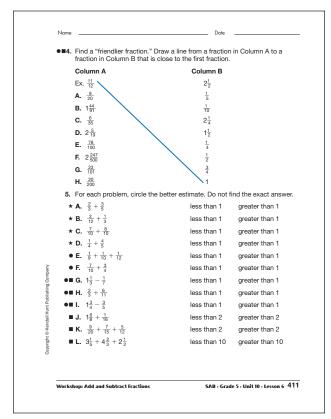
- 1. A. Estimates will vary. Possible response: about  $1\frac{1}{2}$ 
  - **B.**  $\frac{19}{12} = 1\frac{7}{12}$
  - **C.** 10 black pieces + 9 black pieces = 19 black pieces or 1 red whole and 7 black pieces
- **2. A.** Estimates will vary. Possible response: a little more than 2
  - **B.**  $3\frac{10}{15} 1\frac{6}{15} = 2\frac{4}{15}$
  - **C.** Responses will vary. Possible response: I estimated that the difference would be a little more than 2, and  $2\frac{4}{15}$  is so I am confident about my answer.

3.

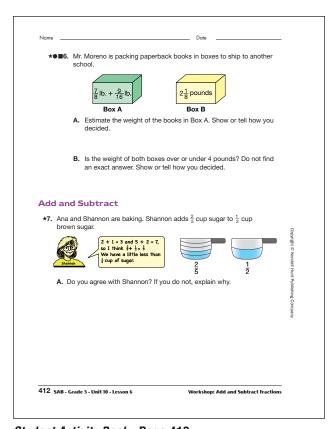




- **5. A.** less than 1
  - **B.** less than 1
  - C. greater than 1
  - **D.** greater than 1
  - **E.** less than 1
  - **F.** greater than 1
  - **G.** greater than 1
  - **H.** greater than 1
  - I. less than 1
  - J. less than 2
  - K. less than 2
  - L. greater than 10
- **6. A.** Estimates will vary. Possible response: About  $1\frac{1}{2}$  pounds.  $\frac{7}{8}$  is almost 1 and  $\frac{9}{16}$  is just over  $\frac{1}{2}$ , so  $1\frac{1}{2}$  pounds is a close estimate.
  - **B.**\*  $1\frac{1}{2}$  pounds +  $2\frac{1}{8}$  pounds is less than 4 pounds. Possible explanation: 1 pound plus 2 pounds is 3 pounds. When I add the fractions  $\frac{1}{2}$  plus  $\frac{1}{8}$  is just a little over  $\frac{1}{2}$ , not enough to make another whole.
- **7. A.** I disagree with Shannon. Possible explanation:  $\frac{3}{7}$  cup can't be right for the sum because she started with  $\frac{1}{2}$  cup and added more. She added the denominators together and that is incorrect.
  - **B.**  $\frac{2}{5} + \frac{1}{2} = \frac{4}{10} + \frac{5}{10} = \frac{9}{10}$  cup of sugar

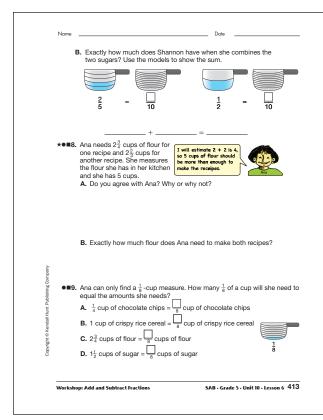


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<sup>\*</sup>Answers and/or discussion are included in the lesson.



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Name	Date	-
●■10.	<b>A.</b> Ana measures $1\frac{s}{3}$ of a cup of flour. How many more cups does she need to make $2\frac{s}{3}$ cups of flour? Show your work and include a number sentence.	
	B. Show how to check your answer with addition.	
know to from to	estions 11–12, read about how Chris and Carla solve $\frac{4}{5} + \frac{3}{20}$ . They ney need to add the same parts together and that fifths are different ventieths. They want to rename the fractions. Here is how they find on denominators so they can rename $\frac{4}{5}$ and $\frac{3}{20}$ with equivalent is.	
Chris	s's Way	
	ultiplies the two denominators together: $5\times 20=$ 100. 100 is a common nator for 5 and 20.	Copyrig
	nator for 5 and 20.  To decide what the numerator will change to, I think about what I multiplied 5 by to get 100, and what I multiplied 20 by to get 100.	Copyright © Kendall Hui
denomi	To decide what the numerator will change to, I think about what I multiplied 5 by to get	Copyright © Kendall Hunt Publishing
denomi	nator for 5 and 20.  To decide what the numerator will change to, I think about what I multiplied 5 by to get 100, and what I multiplied 20 by to get 100.  Ouris  Ouris  Ouris	Copyright © Kendall Hunt Publishing Compa
denomi Chris m denomi Chris m	nator for 5 and 20. To decide what the numerator will change to 1 think about what 1 multiplied 5 by to get 100, and what 1 multiplied 20 by to get 100. White the numerator and nator by 20 to find an equivalent fraction.	Copyright ® Kendall Hunt Publishing Company
denomi Chris m denomi Chris m	nator for 5 and 20. To decide what the numerator will change to 1 think about what 1 multiplied 5 by to get 100, and what 1 multiplied 20 by to get 100. What 1 multiplied 20 by to get 100. The numerator and nator by 20 to find an equivalent fraction. $\frac{4\times 20}{5\times 20} = \frac{80}{100}$ ultiplied 20 $\times$ 5 to get 100, so he multiplies the numerator and ultiplied 20 $\times$ 5 to get 100, so he multiplies the numerator and	Copyright @ Kendall Hunt Publishing Company
Chris m denomi Chris m denomi	nator for 5 and 20. To decide what the numerator will change to 1 think about what 1 multiplied 5 by to get 100, and what 1 multiplied 20 by to get 100. The numerator and nator by 20 to find an equivalent fraction. $\frac{4 \times 20}{5 \times 20} = \frac{80}{100}$ sultiplied 20 $\times$ 5 to get 100, so he multiplies the numerator and nator by 5 to find an equivalent fraction.	Copyright © Kendall Hunt Publishing Company
Chris m denomi Chris m denomi	nator for 5 and 20.  To decide what the numerator will change to I think about what I multiplied 5 by to get 100, and what I multiplied 20 by to get 100.  Solutiplied 5 $\times$ 20 to get 100, so he multiplies the numerator and nator by 20 to find an equivalent fraction. $\frac{4 \times 20}{5 \times 20} = \frac{80}{100}$ ultiplied 20 $\times$ 5 to get 100, so he multiplies the numerator and nator by 5 to find an equivalent fraction. $\frac{3 \times 5}{100} = \frac{15}{100}$ is able to add hundredths: $\frac{80}{200} + \frac{15}{100} = \frac{85}{100}$ . He rewrites it in	Copyright @ Kendall Hunt Publishing Company

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- **8. A.** I disagree with Ana. She only added the whole numbers and she should have added the fractions too because they make another whole cup.
  - **B.**  $2\frac{2}{3} + 2\frac{3}{4}$ =  $2\frac{8}{12} + 2\frac{9}{12}$ =  $4\frac{17}{12}$ =  $5\frac{5}{12}$  cups flour
- 9. A.  $\frac{1}{4}$  cup of chocolate chips =  $\frac{2}{8}$  cup of chocolate chips
  - **B.** 1 cup of crispy rice cereal  $= \frac{8}{8} \text{ cup of crispy rice cereal}$
  - C.  $2\frac{3}{4}$  cups of flour =  $\frac{22}{8}$  cups of flour
  - **D.**  $1\frac{1}{2}$  cups of sugar =  $\frac{\boxed{12}}{8}$  cups of sugar
- **10. A.**  $2\frac{2}{3} 1\frac{5}{8} = 1\frac{1}{24}$  more cups of flour

**B.** 
$$1\frac{1}{24} + 1\frac{5}{8} = 1\frac{1}{24} + 1\frac{15}{24} = 2\frac{16}{24} = 2\frac{2}{3}$$

**II. A.** The common denominator is 12.

$$\frac{2 \times 4}{3 \times 4} = \frac{8}{12} \qquad \frac{1 \times 3}{4 \times 3} =$$

- $\frac{8}{12} + \frac{3}{12} = \frac{11}{12}$
- **B.** The common denominator is  $\boxed{10}$ .

$$\frac{4 \times 2}{5 \times 2} = \frac{8}{10} \qquad \frac{1 \times 5}{2 \times 5} = \frac{5}{10}$$

$$\frac{8}{10} - \frac{5}{10} = \frac{3}{10}$$

**C.** Possible response:

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

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

- 12. A.  $\frac{4}{10} + \frac{3}{10} = \frac{7}{10}$ B.  $\frac{5}{12} + \frac{8}{12} = \frac{13}{12} = 1\frac{1}{12}$ C.  $\frac{6}{8} \frac{1}{8} = \frac{5}{8}$

*1	1. Find common denominators and equivalent fractions Chris's way to solve the problems. You can check your work with fraction circle pieces. <b>A.</b> Solve $\frac{2}{3} + \frac{1}{4}$ . The common denominator is $\square$ .
	$ \begin{array}{c c} 2 \times \square \\ 3 \times \square \end{array} =  \begin{array}{c c} \square \\ 4 \times \square \end{array} =  \begin{array}{c c} \square $
	Write the new number sentence and solve it.
	<b>B.</b> Solve $\frac{4}{5} - \frac{1}{2}$ . The common denominator is $\square$ .
	4 × 1 × 2 × = 1
	Write the new number sentence and solve it.
	C. Chris is solving $\frac12+\frac34$ . He multiplies $2\times 4$ and finds the common denominator 8. Find a common denominator other than 8 to solve $\frac12+\frac34$ .
pany	$1 \times \square = \square$
blishing Com	Write the new number sentence and solve it. Write the answer in simplest form.
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Copyright ©	

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Name		Date	_
Car	la's Way		
until s	she finds a co ent Guide Refe	Carla looks at the denominators and thinks about their multiples mmon one. The Multiplication and Division Facts chart in the reence section helps. If she can't find a common multiple, she denominators together to find one like Chris does.	•
		$\frac{4}{5} + \frac{3}{20}$	
	and see if 5 : 5 × 4 = 20,	take a shortcut. I look at the denominators X some number equals 20.1 know that so the common denominator is 20.	
		10, 15, <mark>20</mark> ,25, 30 0,40, 60, 80	
The c	common multip	iple is 20.	
multip	plies 5 × 4 to	ame $\frac{4}{5}$ so that it has a common denominator of 20. She get 20, so she also multiplies the numerator by 4 and finds	
an eq	quivalent fracti	ion.	
		10n. $\frac{4 \times 4}{5 \times 4} = \frac{16}{20}$ add twentieths: $\frac{16}{9} + \frac{3}{20} = \frac{19}{20}$ .	Copyrig
Now	she is able to	$\frac{4\times4}{5\times4} = \frac{16}{20}$	Copyright @ Kendall H
Now	she is able to	$\begin{array}{c} \frac{4\times4}{25} = \frac{16}{20}\\ \text{add twentieths: } \frac{16}{20} + \frac{3}{20} = \frac{19}{20}.\\ \text{on denominators and equivalent fractions Carla's way to solve} \end{array}$	Copyright © Kendall Hunt Publishi
Now	she is able to Find commo the problems	$\frac{4\times4}{5^24}=\frac{16}{20}$ add twentieths: $\frac{16}{20}+\frac{3}{20}=\frac{19}{20}$ . and denominators and equivalent fractions Carla's way to solve s. You can check your work with fraction circle pieces.	Copyright @ Kendall Hunt Publishing Compa
Now	she is able to Find commo the problems <b>A.</b> $\frac{2}{5} + \frac{3}{10}$	$\frac{4\times 4}{5\times 4}=\frac{16}{20}$ and twentieths: $\frac{16}{20}+\frac{3}{20}=\frac{19}{20}$ . and enominators and equivalent fractions Carla's way to solve s. You can check your work with fraction circle pieces.	Copyright @ Kendall Hunt Publishing Company
Now	she is able to Find commo the problems $\mathbf{A.}  \frac{2}{5} + \frac{3}{10}$ $\mathbf{B.}  \frac{5}{12} + \frac{2}{3}$	$\frac{4\times4}{5\times4}=\frac{16}{20}$ add twentieths: $\frac{16}{20}+\frac{3}{20}=\frac{19}{20}$ . on denominators and equivalent fractions Carla's way to solve s. You can check your work with fraction circle pieces. Number sentence	Copyright @ Kendall Hunt Publishing Company

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4

13.	Solve the problem sure your answers						
	• A. $\frac{2}{5} + \frac{2}{3} = $						
	• B. $\frac{11}{3} + \frac{5}{2} =$						
	• C. $2\frac{1}{8} - 1\frac{1}{4} =$	·				-	
	●■ D. $\frac{6}{8} - \frac{2}{7} = $ _						
	●■ E. $4\frac{1}{4} - 3\frac{5}{12}$	=				_	
	■ <b>F.</b> $4\frac{8}{11} - 2\frac{1}{3}$	=				_	
	■ <b>G.</b> $\frac{12}{5} + \frac{9}{13} =$					_	
	■ H. $3\frac{7}{9} - 2\frac{3}{4} =$	-				_	
<b>*14.</b>	■ H. $3\frac{7}{9} - 2\frac{3}{4} =$ Choose fraction pairs you choose.	airs that	equal 1. V	Vrite numb			v the
<b>*14.</b>	Choose fraction p	airs that	equal 1. V	Vrite numb			
	Choose fraction p	pairs that Use frac 3/4	equal 1. Votion circle	Vrite numb pieces.	per sentence 5 10	ces to show	v the
	Choose fraction p pairs you choose.	pairs that Use frac	equal 1. V ction circle	Vrite numb	per sentenc	ces to show	_
	Choose fraction p pairs you choose. $\frac{7}{8}$ $\frac{1}{3}$	pairs that Use frac	equal 1. V ction circle 4 6	Write numb	5 10	ces to show	_
Copyright © Kendall Hurt Publishing Company	Choose fraction p pairs you choose. $\frac{7}{8}$ $\frac{1}{3}$ Number sentence	vairs that Use frac	equal 1. V	Vrite numb	per sentence	ces to show	_

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Name	Date	
●■15.	Make each number sentence true. You cannot use the digits that are already in each problem.	
	<b>A.</b> $\frac{1}{5} - \frac{1}{3} = 1$ <b>B.</b> $\frac{2}{1} + \frac{3}{1} = \frac{1}{2}$	
	<b>C.</b> $\frac{\Box}{8} + \frac{5}{\Box} = \frac{1}{2}$ <b>D.</b> $\frac{9}{\Box} + \frac{\Box}{8} = 1$	
	$E.  \frac{4}{ } - \frac{4}{ } = \frac{1}{4}$	
	F. Explain how you know your answer to Question 15B is correct by using fraction circle pieces. Draw or describe the pieces you use.	
		Co
√ c	heck-In: Questions 16-17	yright ⊕ Ker
<b>★●■</b> 16	5. Solve the problems. Show your work.	dall Hunt P
	<b>A.</b> $\frac{3}{8} + \frac{4}{5}$ <b>B.</b> $5\frac{3}{4} - 2\frac{1}{16}$ <b>C.</b> $2\frac{5}{12} - 1\frac{2}{3}$	Copyright @ Kendall Hunt Publishing Company
	Choose one problem from Question 16A–C. Show or tell how estimation can help you check the reasonableness of your answer.	pany

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15. Answers may vary. Possible responses given.

**A.**  $\frac{15}{5} - \frac{6}{3} = 1$ 

B.  $\frac{2}{10} + \frac{3}{10} = \frac{1}{2}$ C.  $\frac{2}{8} + \frac{5}{20} = \frac{1}{2}$ D.  $\frac{9}{18} + \frac{4}{8} = 1$ 

**E.**  $\frac{4}{8} - \frac{4}{16} = \frac{1}{4}$ 

**F.** Possible response:  $\frac{2}{10} + \frac{3}{10} = \frac{1}{2}$  with fraction circle pieces is

2 purples + 3 purples = 1 pink.

**16.** A.  $\frac{3}{8} + \frac{4}{5} =$ 

 $\begin{array}{c} \frac{23}{4} - \frac{33}{16} = \\ \frac{92}{16} - \frac{33}{16} = \frac{59}{16} = 3\frac{11}{16} \\ \textbf{C.} \ 2\frac{5}{12} + 1\frac{2}{3} = \end{array}$ 

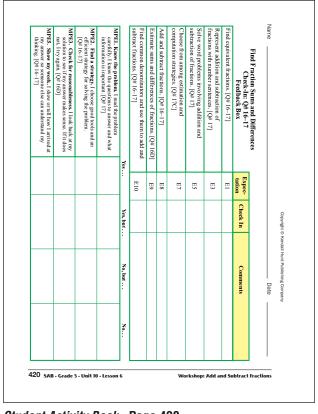
 $2\frac{5}{12} + 1\frac{8}{12} = 3\frac{13}{12} = 4\frac{1}{12}$ 

**D.** Responses will vary. Possible response: My answer of  $4\frac{1}{12}$  is reasonable because  $2\frac{5}{12}$  is close to  $2\frac{1}{2}$ .  $2\frac{1}{2} + 1\frac{2}{3}$  is a little more than 4, like  $4\frac{1}{12}$ .

- 17. A.\*  $3\frac{1}{2}$  cups of granola;  $\frac{7}{8} + \frac{7}{8} + \frac{7}{8} + \frac{7}{8} = \frac{28}{8} = 3\frac{1}{2}$  cups of granola B.\*  $\frac{1}{6}$  cup more of granola;  $3\frac{2}{3} 3\frac{1}{2} = 3\frac{4}{6} 3\frac{3}{6} = \frac{1}{6}$  cup of granola
  - C. Answers will vary.

	Name Date
	★●■17. John needs to pack carefully because he does not have any extra room in his small backpack. He wants to pack one serving of granola for each breakfast on his hiking trip. One serving of granola is ½ cups. A. How many cups of granola should John pack in a container so that he and Mark can each have exactly one serving for breakfast for
	Number sentence  B. The container in John's backpack can hold 3\frac{2}{3} cups. How many more cups of granola can he fit into the container? Show how you solved the problem.
	Number sentence  C. How did you decide whether to estimate or find an exact answer in Questions 17A and 17B?
ag i	Choose to play either <i>Circle Duets</i> to practice adding fractions or the <i>Closest to</i> game to practice estimating and subtracting fractions. Both games are in the Student Activity Book.
;	Workshop: Add and Subtract Fractions SAB - Grade S - Unit 10 - Lesson 6 419

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<sup>\*</sup>Answers and/or discussion are included in the lesson.