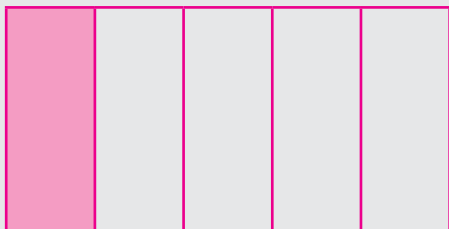# Fifth Grade
Answer Key
Unit 4: Adding & Subtracting Fractions

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Problem of the Day
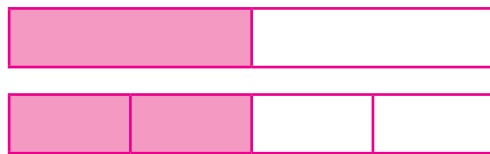
Lesson 1

Model the fraction $\frac{1}{5}$ using a diagram.

Lesson 2

Circle the fraction below that is closest to $\frac{2}{7}$.

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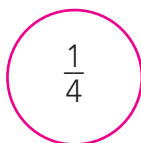
$\frac{1}{2}$

$\frac{3}{4}$

Lesson 3

Model $\frac{1}{2}$ with fraction strips. Model $\frac{2}{4}$ with fraction strips. What do you notice?

Sample answer: $\frac{1}{2}$ is equivalent to $\frac{2}{4}$.
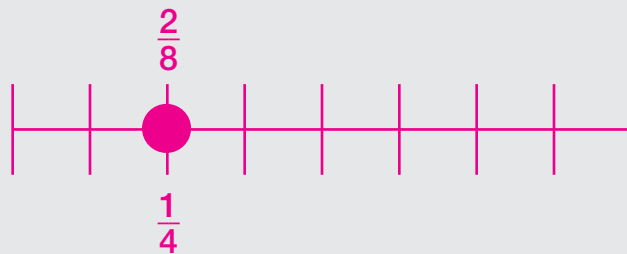
Lesson 4

Divide a number line into 4 equal sections. Label the whole numbers, 0 and 1. Plot the fraction $\frac{1}{4}$ on the number line. Now, divide the number line into 8 equal sections. Name the numerator of the number plotted when the denominator is 8.

$\frac{2}{8}$

$\frac{1}{4}$

Lesson 5

Find the sum:

$\frac{2}{5} + \frac{1}{5} = \frac{3}{5}$
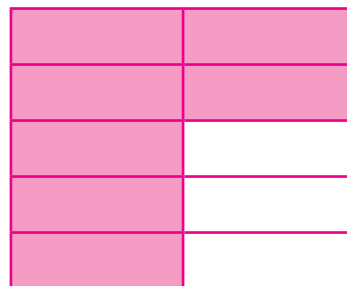
Problem of the Day

Lesson 6

Elijah pours $\frac{2}{3}$ cup of water into a beaker. Jonathan pours $\frac{1}{3}$ cup of water into the beaker. How much water does the beaker contain?

$\frac{3}{3}$ or 1 cup

Lesson 7

Add: $\frac{5}{8} + \frac{2}{8}$

Draw a model that can be used to represent the sum.

Lesson 8

Model the fraction $\frac{7}{10}$ using a diagram.

Lesson 9

What benchmark fraction could be used to estimate the fraction $\frac{9}{11}$?

$\frac{9}{10}$
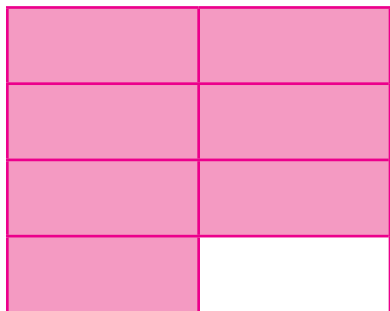
Lesson 10

Model $\frac{1}{3}$ with fraction strips. Model $\frac{2}{6}$ with fraction strips. What do you notice about the fractions?

Sample answer: They are equivalent fractions.

Problem of the Day

Lesson 11

Find the difference:

$$\frac{7}{9} - \frac{2}{9} = \frac{5}{9}$$

Lesson 13

Subtract: $\frac{8}{11} - \frac{2}{11}$

Draw a model that can be used to represent the difference.

Lesson 12

Kate used $\frac{3}{4}$ cup of sugar in a cookie recipe. Amy used $\frac{1}{4}$ cup of sugar in a different cookie recipe. How much more sugar did Kate use than Amy?

$\frac{1}{2}$ cup more

Lesson 14

Add: $\frac{1}{4} + \frac{1}{3}$

$\frac{7}{12}$

Lesson 15

Subtract: $\frac{1}{2} - \frac{1}{6}$

$\frac{2}{6}$

Problem of the Day

Lesson 16

Model $1\frac{2}{5}$ using a fraction strip diagram. Model $1\frac{4}{10}$ using a fraction strip diagram. What do you notice about the numbers?
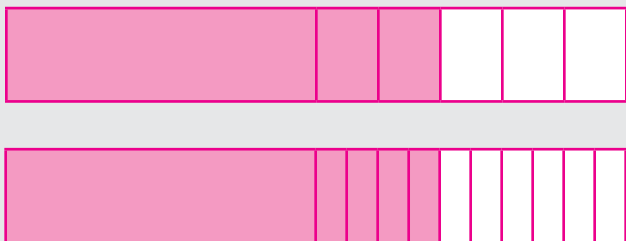
Sample answer: They are equivalent fractions.

Lesson 17

Add: $2\frac{1}{5} + 3\frac{2}{5}$

$5\frac{3}{5}$

Lesson 18

What is the sum of $3\frac{1}{8}$ and $4\frac{2}{8}$?

$7\frac{3}{8}$

Lesson 19

The sum of $4\frac{1}{5}$ and another number is 5. What is the other number?

$\frac{4}{5}$

Lesson 20

Draw a model that can be used to show the sum of $5\frac{5}{6}$ and $1\frac{1}{6}$.

Models will vary, but should show the answer as 7.

Pre-Assessment

1. Add: $\frac{2}{5} + \frac{1}{5}$

$\frac{3}{5}$

2. Which of the following is the best estimate of $\frac{3}{8} + \frac{1}{6}$?

  A. $\frac{1}{4}$

  B. $\frac{1}{2}$

  C. $\frac{2}{3}$

  D. $\frac{3}{4}$

3. Write a fraction that is equivalent to $\frac{1}{3}$.

Sample answer: $\frac{2}{6}$

4. Add: $\frac{1}{6} + \frac{2}{3}$

$\frac{5}{6}$

5. Subtract: $\frac{6}{8} - \frac{1}{2}$

$\frac{2}{8}$

6. Andy ran $1\frac{1}{4}$ miles on Friday and $\frac{3}{4}$ mile on Saturday. Write the total distance he ran on Friday and Saturday.

2 miles

7. Subtract: $4\frac{3}{5} - 2\frac{1}{5}$

$2\frac{2}{5}$

8. Subtract: $7\frac{5}{6} - 2\frac{3}{4}$

$\frac{61}{12}$

9. Melissa eats $\frac{1}{12}$ of a pizza and Adam eats $\frac{1}{3}$ of the same pizza. How much of the pizza is left? Write your answer as a fraction.

$\frac{7}{12}$

10. A recipe calls for $2\frac{1}{4}$ cups of sugar. Adrian has $\frac{2}{3}$ cup of sugar. How much more sugar does he need? Write your answer as a mixed number.

$1\frac{7}{12}$

Adding Fractions Quiz

1. Add: $\frac{2}{7} + \frac{3}{7}$

$\frac{5}{7}$

2. Name appropriate benchmark fractions to use when estimating the sum of $\frac{5}{11}$ and $\frac{3}{10}$.

$\frac{5}{10} + \frac{3}{10}$

3. Draw an area model to show a fraction equivalent to $\frac{7}{10}$.

Answers will vary.

4. Explain how multiplication can be used to find a fraction equivalent to $\frac{4}{9}$.

Sample answer: If you multiply the numerator and denominator by the same number, you will get an equivalent fraction.

5. Draw a number line model to show a fraction equivalent to $\frac{3}{5}$.

Answers will vary.

6. Add: $\frac{2}{7} + \frac{3}{14}$

$\frac{7}{14}$

7. Find the sum of $\frac{5}{7}$ and $\frac{1}{3}$.

$\frac{22}{21}$

8. Hannah spent $\frac{1}{5}$ of her allowance on a book and $\frac{3}{10}$ of her allowance on a new set of art tools. What fraction of her allowance did she spend?

$\frac{5}{10}$ or $\frac{1}{2}$

9. Mark records $\frac{1}{8}$ inch of rain on Friday and $\frac{1}{4}$ inch of rain on Saturday. What is the total amount of rain Mark recorded over the course of the two days?

$\frac{3}{8}$

10. Michael read $\frac{3}{8}$ of his book on Monday. He read $\frac{1}{6}$ of the book on Tuesday. He claims that he has read more than $\frac{1}{2}$ of the book. Is he correct? Explain why or why not.

Sample answer: Yes, he is correct. He read $\frac{13}{24}$ of the book which is more than $\frac{1}{2}$.

Subtracting Fractions Quiz

1. Subtract: $\frac{7}{8} - \frac{4}{8}$

$\frac{3}{8}$

2. Name appropriate benchmark fractions to use when estimating the difference: $\frac{8}{11} - \frac{2}{7}$.

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

3. Describe how fraction strips can be used to model the difference: $\frac{3}{5} - \frac{3}{10}$

Sample answer: Fraction strips can help you visualize the different between the two fractions.

4. Subtract: $\frac{5}{6} - \frac{7}{12}$

$\frac{3}{12}$

5. Subtract: $\frac{3}{4} - \frac{1}{6}$

$\frac{7}{12}$

6. Find the difference: $\frac{11}{24} - \frac{3}{8}$

$\frac{2}{24}$

7. Find the difference: $\frac{6}{7} - \frac{1}{3}$

$\frac{11}{7}$

8. Lisa ran $\frac{7}{12}$ of a mile this morning and $\frac{3}{8}$ of a mile this afternoon. How much farther did Lisa run this morning than this afternoon?

$\frac{5}{24}$ of a mile

9. Athlene painted $\frac{5}{6}$ of a mural before lunch. She painted $\frac{7}{8}$ of the mural after lunch. How much more of the mural did she finish after lunch than before?

$\frac{1}{24}$ more

10. Joseph poured $\frac{5}{8}$ gallon of water into a container. He used $\frac{9}{16}$ gallon of that to water his plants. How much water is left in the container?

$\frac{1}{16}$ gallon

Adding and Subtracting Mixed Numbers Quiz

1. Add: $1\frac{3}{7} + \frac{3}{4}$

$\frac{51}{28}$

2. Add: $2\frac{7}{9} + 3\frac{1}{3}$

$\frac{35}{9}$

3. What is the sum of $4\frac{5}{18}$ and $2\frac{1}{12}$?

$\frac{204}{36}$

4. Subtract: $2\frac{2}{9} - 1\frac{2}{3}$

$\frac{5}{9}$

5. Subtract: $9\frac{7}{15} - 3\frac{1}{5}$

$\frac{94}{15}$

6. Find the difference: $5\frac{5}{6} - 3\frac{7}{36}$

$\frac{95}{36}$

7. Lindsey biked $3\frac{1}{4}$ miles on Saturday and $2\frac{2}{3}$ miles on Sunday. How many miles did Lindsey bike in all on Saturday and Sunday?

$\frac{71}{12}$ **miles**

8. Camille used $2\frac{1}{3}$ bags of potting soil on Monday and $1\frac{3}{4}$ bags of potting soil on Tuesday. How much more soil did Camille use on Monday than on Tuesday?

$\frac{7}{12}$ **more soil**

9. Ashley ran a mile in $9\frac{3}{4}$ minutes. Donna ran a mile in $11\frac{1}{6}$ minutes. How much longer did it take Donna to run the mile?

$\frac{17}{12}$ **minutes longer**

10. Tom used $2\frac{1}{8}$ cups of water in Solution A and $3\frac{3}{4}$ cups of water in Solution B. How much water did he use in the two solutions combined?

$\frac{96}{24}$

Assessment

1. What is the sum of $\frac{1}{15}$ and $\frac{7}{15}$?

$\frac{8}{15}$

2. Add: $\frac{3}{17} + \frac{7}{17}$

$\frac{10}{17}$

3. Estimate the sum of $\frac{6}{13}$ and $\frac{3}{11}$.

$\sim\frac{3}{4}$

4. Estimate the sum of $\frac{3}{10}$ and $\frac{5}{16}$.

$\sim\frac{1}{2}$

5. Write a fraction equivalent to $\frac{5}{8}$.

Answers will vary.

6. Write a fraction equivalent to $\frac{4}{9}$.

Answers will vary.

7. Add: $\frac{1}{18} + \frac{2}{3}$

$\frac{13}{18}$

8. Add: $\frac{1}{12} + \frac{5}{6}$

$\frac{11}{12}$

9. Subtract: $5\frac{2}{7} - 3\frac{4}{21}$

$\frac{44}{21}$

10. Subtract: $4\frac{5}{9} - 2\frac{5}{27}$

$\frac{64}{27}$

11. What is the sum of $4\frac{5}{18}$ and $2\frac{1}{6}$?

$\frac{116}{18}$

12. What is the sum of $3\frac{3}{11}$ and $5\frac{2}{33}$?

$\frac{275}{33}$

13. The sum of $2\frac{1}{13}$ and a mixed number is $5\frac{3}{26}$. What is the other mixed number?

$3\frac{3}{26}$

14. The sum of $3\frac{1}{11}$ and a mixed number is $4\frac{5}{22}$. What is the other mixed number?

$1\frac{3}{22}$

15. From his home, Joe drives $4\frac{7}{8}$ miles to get to a local supermarket and he drives $2\frac{1}{6}$ miles to get to the pharmacy. How much closer to Joe's home is the pharmacy than the supermarket?

$\frac{65}{24}$ miles

16. Jessica has $1\frac{5}{6}$ bags of soil. She needs $2\frac{1}{2}$ bags of soil. How much more soil does Jessica need?

$\frac{1}{6}$ bags more

17. Fred needs to fill a $3\frac{1}{2}$-gallon bucket with seeds. So far, he put $2\frac{1}{4}$ gallons of seeds in the bucket. How many more gallons of seeds does he need to add to the bucket?

$1\frac{1}{4}$ **more gallons of seeds**

18. Caitlyn used $1\frac{1}{8}$ gallons of paint. Jimmy used $2\frac{2}{3}$ gallons of paint. How many gallons of paint have they used altogether?

$\frac{91}{24}$ **gallons of paint**

19. Amy and Heather are in a cooking competition. Amy uses $\frac{3}{4}$ cup of flour and Heather uses $1\frac{2}{3}$ cups of flour. How much flour do they use altogether?

$\frac{24}{12}$ **cups of flour**

20. On Thursday, Elizabeth ran a mile in $9\frac{5}{6}$ minutes. On Friday, she ran a mile in $8\frac{1}{4}$ minutes. How much longer did it take her to run the mile on Thursday than on Friday?

$\frac{19}{12}$ **minutes longer**

Estimate the sum:

$$\frac{2}{7} + \frac{4}{15}$$

Answers will vary.

Estimating Fractional Sums Cards

Estimate the sum:

$$\frac{6}{15} + \frac{3}{10}$$

Answers will vary.

Estimate the sum:

$$\frac{4}{9} + \frac{3}{11}$$

Answers will vary.

Estimate the sum:

$$\frac{6}{11} + \frac{2}{5}$$

Answers will vary.

Estimate the sum:

$$\frac{3}{8} + \frac{3}{5}$$

Answers will vary.

Estimating Fractional Sums Cards

Estimate the sum:

$$\frac{7}{8} + \frac{2}{9}$$

Answers will vary.

Estimate the sum:

$$\frac{7}{10} + \frac{4}{7}$$

Answers will vary.

Estimate the sum:

$$\frac{10}{13} + \frac{5}{11}$$

Answers will vary.

Estimate the sum:

$$\frac{5}{8} + \frac{5}{14}$$

Answers will vary.

Estimating Fractional Sums Cards

Estimate the sum:

$$\frac{4}{11} + \frac{6}{10}$$

Answers will vary.

Estimating Fractional Sums Cards

Estimate the sum:

$$\frac{3}{13} + \frac{4}{14}$$

Answers will vary.

Estimate the sum:

$$\frac{3}{7} + \frac{3}{11}$$

Answers will vary.

Estimating Fractional Sums Cards

Write a fraction equivalent to $\frac{1}{2}$ in the blank below.

_____

Fill in the boxes to show how multiplication can be used to find the equivalent fraction provided.

$$\frac{1}{2} = \frac{1 \times \boxed{}}{2 \times \boxed{}} = \frac{\boxed{}}{\boxed{}}$$ **Answers will vary.**

Equivalent Fractions Cards

Write a fraction equivalent to $\frac{1}{3}$ in the blank below.

_____

Fill in the boxes to show how multiplication can be used to find the equivalent fraction provided.

$$\frac{1}{3} = \frac{1 \times \square}{3 \times \square} = \frac{\square}{\square}$$ **Answers will vary.**

Equivalent Fractions Cards

Write a fraction equivalent to $\frac{1}{4}$ in the blank below.

_____

Fill in the boxes to show how multiplication can be used to find the equivalent fraction provided.

$$\frac{1}{4} = \frac{1 \times \square}{4 \times \square} = \frac{\square}{\square}$$ **Answers will vary.**

Write a fraction equivalent to $\frac{1}{6}$ in the blank below.

_____

Fill in the boxes to show how multiplication can be used to find the equivalent fraction provided.

$$\frac{1}{6} = \frac{1 \times \square}{6 \times \square} = \frac{\square}{\square}$$ **Answers will vary.**

Write a fraction equivalent to $\frac{2}{3}$ in the blank below.

_____

Fill in the boxes to show how multiplication can be used to find the equivalent fraction provided.

$$\frac{2}{3} = \frac{2 \times \square}{3 \times \square} = \frac{\square}{\square}$$ **Answers will vary.**

Write a fraction equivalent to $\frac{3}{4}$ in the blank below.

_____

Fill in the boxes to show how multiplication can be used to find the equivalent fraction provided.

$$\frac{3}{4} = \frac{3 \times \square}{4 \times \square} = \frac{\square}{\square}$$ **Answers will vary.**

Write a fraction equivalent to $\frac{2}{5}$ in the blank below.

_____

Fill in the boxes to show how multiplication can be used to find the equivalent fraction provided.

$$\frac{2}{5} = \frac{2 \times \square}{5 \times \square} = \frac{\square}{\square}$$ **Answers will vary.**

Equivalent Fractions Cards

Write a fraction equivalent to $\frac{3}{8}$ in the blank below.

_____

Fill in the boxes to show how multiplication can be used to find the equivalent fraction provided.

$$\frac{3}{8} = \frac{3 \times \square}{8 \times \square} = \frac{\square}{\square}$$ **Answers will vary.**

Write a fraction equivalent to $\frac{4}{7}$ in the blank below.

_____

Fill in the boxes to show how multiplication can be used to find the equivalent fraction provided.

$$\frac{4}{7} = \frac{4 \times \square}{7 \times \square} = \frac{\square}{\square}$$ **Answers will vary.**

Write a fraction equivalent to $\frac{2}{9}$ in the blank below.

_____

Fill in the boxes to show how multiplication can be used to find the equivalent fraction provided.

$$\frac{2}{9} = \frac{2 \times \square}{9 \times \square} = \frac{\square}{\square}$$ **Answers will vary.**

Write a fraction equivalent to $\frac{5}{11}$ in the blank below.

_____

Fill in the boxes to show how multiplication can be used to find the equivalent fraction provided.

$$\frac{5}{11} = \frac{5 \times \square}{11 \times \square} = \frac{\square}{\square}$$ **Answers will vary.**

Write a fraction equivalent to $\frac{3}{10}$ in the blank below.

_____

Fill in the boxes to show how multiplication can be used to find the equivalent fraction provided.

$$\frac{3}{10} = \frac{3 \times \square}{10 \times \square} = \frac{\square}{\square}$$ **Answers will vary.**

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Equivalent Fractions Cards

Find the sum:

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

$$\frac{5}{6}$$

Find the sum:

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

$$\frac{19}{20}$$

Find the sum:

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

$$\frac{5}{6}$$

Find the sum:

$$\frac{6}{7} + \frac{1}{3}$$

$$\frac{25}{21}$$

Find the sum:

$$\frac{5}{8} + \frac{1}{4}$$

$$\frac{21}{24}$$

Find the sum:

$$\frac{1}{3} + \frac{3}{5}$$

$$\frac{14}{15}$$

Find the sum:

$$\frac{6}{11} + \frac{5}{22}$$

$$\frac{17}{22}$$

Find the sum:

$$\frac{3}{10} + \frac{4}{5}$$

$$\frac{11}{10}$$

Find the sum:

$$\frac{3}{4} + \frac{8}{12}$$

$$\frac{17}{12}$$

Find the sum:

$$\frac{2}{3} + \frac{7}{9}$$

$$\frac{13}{9}$$

Find the sum:

$$\frac{1}{8} + \frac{9}{16}$$

$$\frac{11}{16}$$

Find the sum:

$$\frac{2}{5} + \frac{1}{6}$$

$$\frac{17}{30}$$

A recipe calls for $\frac{1}{2}$ cup of cane sugar and $\frac{3}{4}$ cup of powdered sugar. How much sugar does the recipe require in all?

$1\frac{1}{4}$ _____ cup(s)

Levi walked $\frac{2}{3}$ mile this morning and $\frac{5}{6}$ mile this afternoon. How far did Levi walk today?

$$\frac{9}{6}$$ _____ mile(s)

Casey ate $\frac{3}{8}$ of a pie. Andy ate $\frac{1}{4}$ of the same pie. How much of the pie did they eat altogether?

$\frac{5}{8}$
_____ pie

On Monday, Eve completed $\frac{1}{5}$ of a task. On Tuesday, she completed $\frac{3}{10}$ of the same task. How much of the task has she finished?

$\frac{5}{10}$
_____

Estimate the difference:

$$\frac{7}{13} - \frac{2}{9}$$

Answers will vary.

Estimating Fractional Differences Cards

Estimate the difference:

$$\frac{10}{12} - \frac{3}{11}$$

Answers will vary.

Estimate the difference:

$$\frac{5}{9} - \frac{4}{15}$$

Answers will vary.

Estimate the difference:

$$\frac{6}{10} - \frac{4}{11}$$

Answers will vary.

Estimate the difference:

$$\frac{8}{13} - \frac{5}{14}$$

Answers will vary.

Estimating Fractional Differences Cards

Estimate the difference:

$$\frac{12}{17} - \frac{2}{9}$$

Answers will vary.

Estimate the difference:

$$\frac{11}{14} - \frac{5}{8}$$

Answers will vary.

Estimate the difference:

$$\frac{11}{16} - \frac{3}{13}$$

Answers will vary.

Estimate the difference:

$$\frac{6}{13} - \frac{4}{15}$$

Answers will vary.

Estimate the difference:

$$\frac{11}{15} - \frac{2}{5}$$

Answers will vary.

Estimating Fractional Differences Cards

Estimate the difference:

$$\frac{6}{11} - \frac{5}{16}$$

Answers will vary.

Estimate the difference:

$$\frac{8}{13} - \frac{3}{10}$$

Answers will vary.

Carlos swam $1\frac{3}{4}$ laps this morning. He swam $2\frac{1}{12}$ laps this evening. How many laps did he swim in all today?

$\frac{46}{12}$

_____ laps

Jason used $2\frac{3}{4}$ cups of sugar in his sugar cookie dough. Kenny used $1\frac{2}{3}$ cups of sugar in his chocolate chip cookie dough. How many more cups of sugar did Jason use than Kenny?

$\frac{13}{12}$ _____ cup(s)

Amara filled $2\frac{1}{3}$ jars with colored rocks. Ethan filled $1\frac{7}{8}$ jars with colored rocks. If they combine the rocks, how many jars can they fill?

_____$\frac{101}{24}$_____ jars

Joshua drove $16\frac{1}{8}$ miles this morning. Then, he drove $24\frac{3}{4}$ miles this evening. How many miles did Joshua drive in all today?

$\frac{981}{24}$ _____ miles

Find the sum.

$$2\frac{3}{5} + 4\frac{1}{6}$$

$$\frac{228}{30}$$

Find the sum.

$$5 \frac{1}{9} + 2 \frac{1}{18}$$

$$\frac{129}{18}$$

Find the difference.

$$3\frac{5}{24} - 1\frac{1}{8}$$

$$\frac{50}{24}$$

Math Hunt Cards

Find the difference.

$$6\frac{7}{8} - 5\frac{2}{3}$$

$$\frac{29}{24}$$

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Math Hunt Cards

The sum of $3\frac{1}{5}$ and another mixed number is $5\frac{3}{10}$. What could the other mixed number be?

$$2\frac{1}{10}$$

The sum of $2\frac{7}{12}$ and another mixed number is $4\frac{1}{8}$. What could the other mixed number be?

$$1\frac{13}{24}$$

Two mixed numbers have a sum of $4\frac{1}{5}$. Write two possible addends.

Answers will vary.

Two mixed numbers have a sum of $4\frac{7}{20}$. Write two possible addends.

Answers will vary.

Dylan uses $3\frac{1}{5}$ ft. of lumber on Project A and $5\frac{1}{8}$ ft. of lumber on Project B. How much more lumber did he use on Project B?

$$\frac{77}{40} \text{ ft. more}$$

Casey's laptop has $2\frac{3}{4}$ hours of battery life remaining. Melissa's laptop has $3\frac{1}{6}$ hours of battery life remaining. How many more hours of battery life does Melissa's computer have remaining?

$$\frac{5}{12}$$

Michelle used $2\frac{1}{4}$ gallons of paint when painting her bedroom. She used $1\frac{3}{5}$ gallons of paint when painting her kitchen. How many gallons of paint did she use in all?

$$\frac{85}{20}$$

David's labrador eats $2\frac{1}{2}$ cups of dog food per day. His poodle eats $\frac{3}{4}$ cup of dog food per day. How many cups of dog food does David feed his two dogs combined each day?

$3\frac{1}{4}$