

1. Ursula mixed $3\frac{1}{8}$ cups of dry ingredients with $1\frac{2}{5}$ cups of liquid ingredients. For numbers 1a–1c, estimate the amount of ingredients Ursula used. Choose the correct benchmarks and sum.

1a. Ursula used about _____ cups of dry ingredients.

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

1b. Ursula used about _____ cup(s) of liquid ingredients.

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

1c. Ursula used about _____ cups of ingredients.

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

2. It takes Evan $6\frac{3}{4}$ hours to mow 3 lawns. It takes him $2\frac{1}{3}$ hours to mow Mr. Gal's lawn and $1\frac{3}{4}$ hours to mow Ms. Lee's lawn. How many hours does it take Evan to mow the third lawn? Use the numbers and symbols to write an equation that represents the problem. Then solve the equation. Symbols may be used more than once or not at all.

$6\frac{3}{4}$

$2\frac{1}{3}$

$1\frac{3}{4}$

\times

$=$

$+$

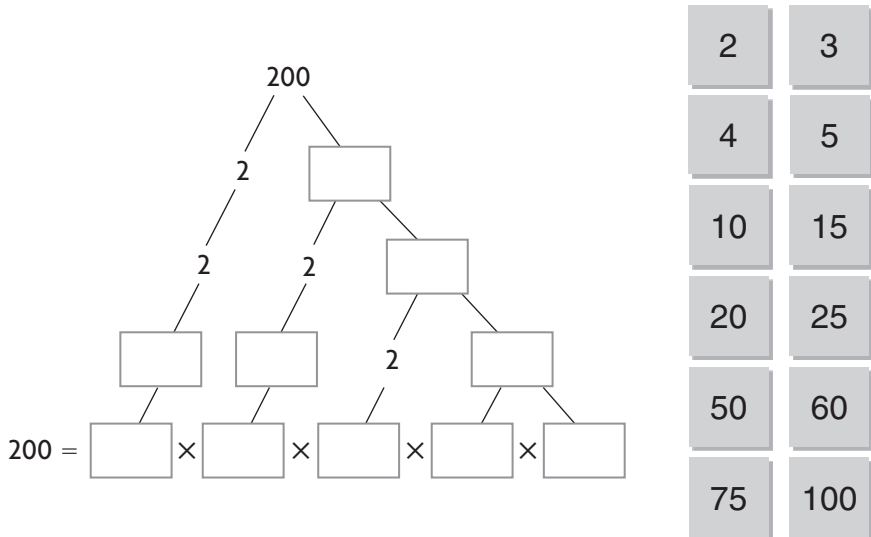
Time needed to mow the third lawn: _____ hours



3. Samuel walked in the Labor Day parade. He walked $3\frac{1}{4}$ miles along the parade route and $2\frac{5}{6}$ miles home. For numbers 3a–3c, fill in each blank.

- 3a. Rounded to the closest benchmark, Samuel walked about _____ miles on the parade route.
- 3b. Rounded to the closest benchmark, Samuel walked about _____ miles home.
- 3c. Samuel walked about _____ miles in all.

4. Regina has 200 DVDs in her movie collection. Complete the diagram by using the tiles to write 200 as the product of its prime factors. You may use a number more than once or not at all.



5. Write $\frac{2}{3}$ and $\frac{3}{4}$ as equivalent fractions using a common denominator.

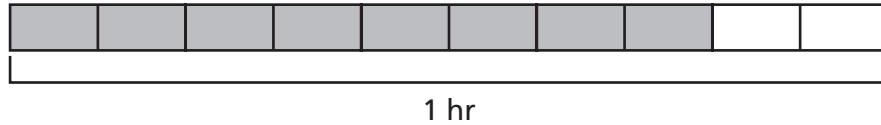
and

6. Ken bought $3\frac{3}{4}$ pounds of apples at the farmers' market. Abby bought $2\frac{1}{8}$ pounds of apples. How many pounds of apples did Ken and Abby buy?

_____ pounds



7. The shaded part of the diagram shows the amount of time Antonio has left from one hour of basketball practice. He will use $\frac{2}{5}$ hour practicing his shooting and the rest of the time practicing dribbling. He wants to determine how much time he will have to practice dribbling. For numbers 7a–7c, select True or False for each statement.



- 7a. To determine how much time he will have to practice dribbling, Antonio must find $1 - \frac{2}{5}$. True False
- 7b. The fractions $\frac{2}{5}$ and $\frac{4}{10}$ are equivalent. True False
- 7c. Antonio will have $\frac{2}{5}$ hour to practice dribbling. True False

8. For numbers 8a–8c, tell whether each expression was rewritten using the Commutative Property or the Associative Property. Choose the correct property of addition.

8a. $\frac{5}{7} + \left(\frac{2}{9} + \frac{4}{7}\right) = \frac{5}{7} + \left(\frac{4}{7} + \frac{2}{9}\right)$

Associative Property
Commutative Property

8b. $\left(\frac{1}{8} + \frac{5}{6}\right) + \frac{1}{6} = \frac{1}{8} + \left(\frac{5}{6} + \frac{1}{6}\right)$

Associative Property
Commutative Property

8c. $\left(1\frac{2}{5} + 3\frac{1}{3}\right) + \frac{4}{5} = \left(3\frac{1}{3} + 1\frac{2}{5}\right) + \frac{4}{5}$

Associative Property
Commutative Property

9. Meredith uses a rule to write the following sequence of numbers.

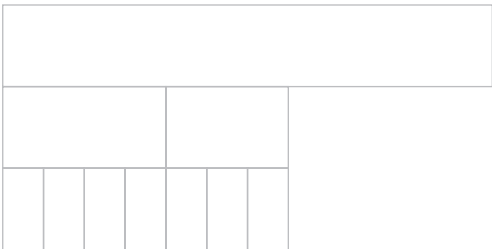
$$14\frac{3}{10}, 13\frac{4}{5}, 13\frac{3}{10}, \text{—————}, 12\frac{3}{10}$$

What rule did Meredith use?

What is the missing number in the sequence?

GO ON 

- 10.** On the playground, $\frac{1}{4}$ of the students are on the jungle gym and $\frac{1}{3}$ of the students are playing kickball. What part of all the students on the playground is on the jungle gym or playing kickball? Use the tiles to complete the fraction strip model to show how you found your answer. The fractions may be used more than once or not at all.



$\frac{1}{2}$	$\frac{1}{3}$
$\frac{1}{4}$	$\frac{3}{4}$
$\frac{1}{12}$	1

_____ of the students

- 11.** Missy read $\frac{1}{12}$ of a book by Monday, $\frac{1}{4}$ of the book by Tuesday, and $\frac{5}{12}$ of the book by Wednesday.

Part A

What is the rule for how much of the book Missy reads each day? Show how you can check your answer.

Part B

If the pattern continues, how much of the book will Missy have read by Friday? Explain how you found your answer.



12. Jessica bought $\frac{1}{2}$ pound of roast beef and $\frac{5}{6}$ pound of ham. Which pairs of fractions are equivalent to the amounts Jessica bought? Mark all that apply.

- (A) $\frac{8}{16}$ and $\frac{10}{16}$ (C) $\frac{5}{10}$ and $\frac{8}{10}$
 (B) $\frac{6}{12}$ and $\frac{10}{12}$ (D) $\frac{12}{24}$ and $\frac{20}{24}$

13. Four presentations are being offered at a training seminar. The table shows how long each presentation runs.

Presentation Lengths	
Presentation	Time (in hours)
1	$4\frac{1}{2}$
2	$3\frac{3}{4}$
3	$5\frac{1}{3}$
4	$4\frac{2}{3}$

Match each pair of presentations with the difference in length between them.

- Presentation 1 and Presentation 2 • • $\frac{3}{4}$ hour
 Presentation 2 and Presentation 4 • • $\frac{5}{6}$ hour
 Presentation 1 and Presentation 3 • • $\frac{11}{12}$ hour

14. For numbers 14a–14d, tell which expressions require you to rename mixed numbers before you can subtract. Find each difference. Write each expression and the difference in the correct box.

14a. $5\frac{2}{5} - 2\frac{1}{4}$

14c. $7\frac{2}{3} - 6\frac{1}{8}$

14b. $5 - 2\frac{7}{8}$

14d. $9\frac{1}{6} - 5\frac{2}{3}$

Requires Renaming

Does Not Require Renaming



- 15.** Horatio sanded a dresser for $1\frac{1}{4}$ hours. Then he stained the dresser for $2\frac{1}{3}$ hours. For numbers 15a–15c, select True or False for each statement.

- 15a. A common denominator of the mixed numbers is 12. True False
- 15b. The amount of time spent sanding the dresser can be rewritten as $1\frac{3}{12}$ hours. True False
- 15c. Horatio spent $1\frac{1}{6}$ hours longer staining the dresser than sanding it. True False

- 16.** Nathan spent $\frac{1}{5}$ of his allowance on a movie ticket and $\frac{1}{4}$ of his allowance on a snack.

Part A

Complete the calculations below to write equivalent fractions with a common denominator.

$$\frac{1}{5} = \frac{1 \times \boxed{}}{5 \times \boxed{}} = \frac{\boxed{}}{\boxed{}}$$

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

Part B

How much of his allowance did Nathan spend? Explain how you found your answer.

Part C

How much more of his allowance did Nathan spend on the snack than on the movie ticket? Explain how you found your answer.

