Shelby County Schools

Extended Learning Day

Packet

4th Grade

Understand Fraction Addition and Subtraction

Name: _____

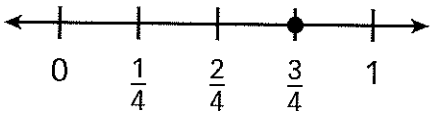
Prerequisite: How do you show fractions with number lines and area models?

Study the example problem showing fractions with number lines and area models. Then solve problems 1–7.

Example

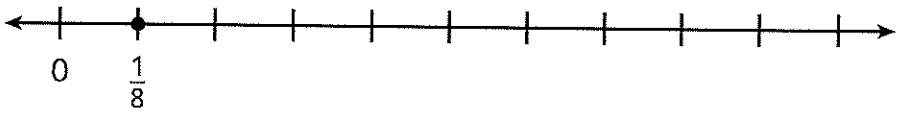
How can you draw two different models to show $\frac{3}{4}$?

An area model for $\frac{3}{4}$ shows 4 equal parts, and 3 parts shaded.

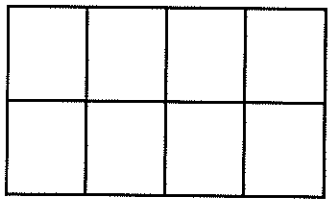


A number line model for $\frac{3}{4}$ shows each whole cut into 4 equal parts. $\frac{3}{4}$ is the mark at the end of the third part.

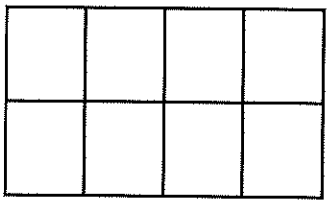
1 Label the numbers 1, $\frac{3}{8}$, and $\frac{4}{8}$ on the number line.



2 Shade the area model to show $\frac{3}{8}$.

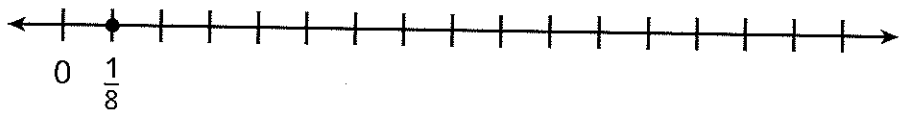


3 Shade the area model to show $\frac{4}{8}$.

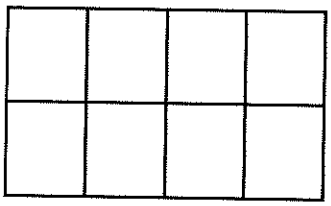


Solve.

4 Show the numbers $\frac{8}{8}$ and $\frac{10}{8}$ on the number line.



5 Shade the area model to show $\frac{8}{8}$.



6 Why can't you show $\frac{10}{8}$ on the area model above?

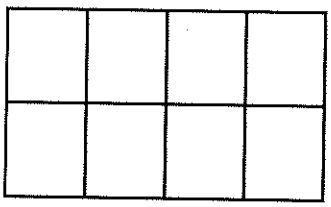
_____

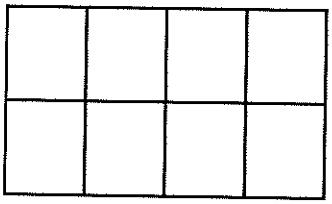
_____

_____

_____

7 Shade the area models below to show $\frac{10}{8}$.





Name: _____

Show Adding and Subtracting Fractions

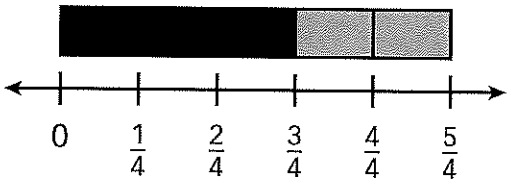
Study how the example shows adding fractions.
Then solve problems 1–12.

Example

You can count on or count back to add or subtract whole numbers.
You can do the same to add or subtract fractions.

To add fourths, use a number line that shows fourths.

Add $\frac{3}{4} + \frac{2}{4}$.



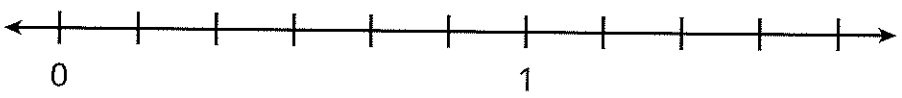
Start at $\frac{3}{4}$. One more fourth is $\frac{4}{4}$, and another fourth is $\frac{5}{4}$.

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

1 Count by sixths to fill in the blanks:

$\frac{1}{6}, \frac{2}{6}$, ____, ____, ____, ____, ____, ____, ____, ____

2 Now label the number line to show sixths.



3 What is $\frac{1}{6}$ more than $\frac{2}{6}$? _____

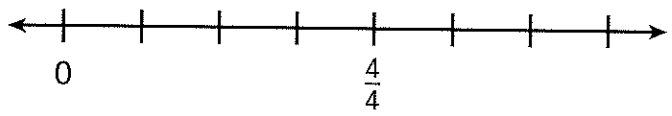
4 What is $\frac{1}{6}$ less than $\frac{2}{6}$? _____

5 What is $\frac{1}{6}$ more than $\frac{6}{6}$? _____

6 What is $\frac{1}{6}$ less than $\frac{6}{6}$? _____

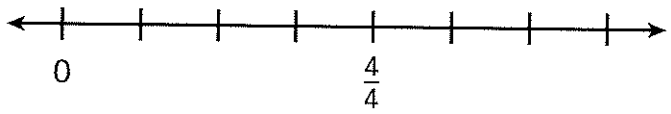
Solve.

7 Label the number line to show fourths.



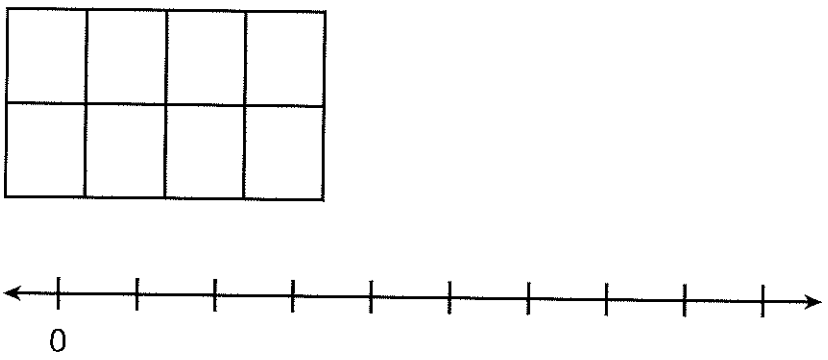
8 Now use the number line in problem 7 to show $\frac{2}{4} + \frac{2}{4}$.

9 Label the number line to show fourths again.

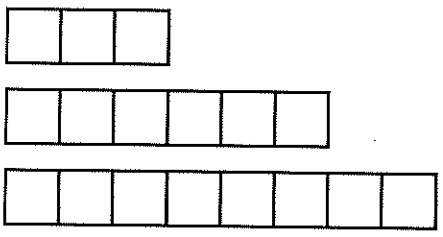


10 Now use the number line in problem 9 to show $\frac{4}{4} - \frac{2}{4}$.

11 Use the number line and area model below to show $\frac{2}{8} + \frac{1}{8} + \frac{3}{8}$.



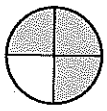
12 Look at the three area models. Which one would you choose to show $\frac{1}{8} + \frac{2}{8}$? Explain how the denominator of the fraction helps you choose the model.



Vocabulary

denominator the number below the line in a fraction. It tells how many equal parts are in the whole.

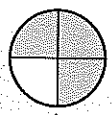
$\frac{3}{4}$



4 equal parts

numerator the number above the line in a fraction. It tells how many equal parts are described.

$\frac{3}{4}$



3 parts described

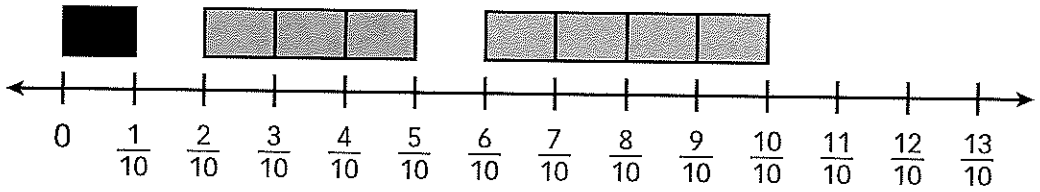
Name: _____

Reason and Write

Study the example. Underline two parts that you think make it a particularly good answer and a helpful example.

Example

Rob drew this diagram to show $\frac{1}{10} + \frac{3}{10} + \frac{4}{10}$



Rob says that his picture shows that $\frac{1}{10} + \frac{3}{10} + \frac{4}{10} = \frac{10}{10}$ or 1 whole.

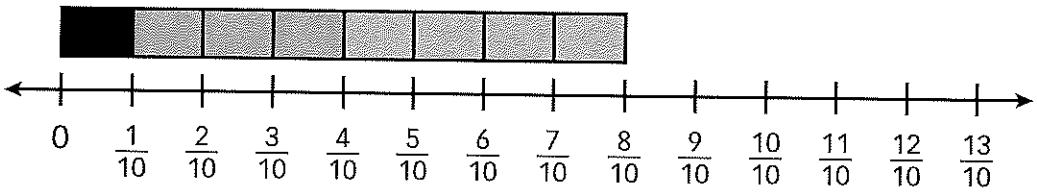
What did Rob do right? What did he do wrong?

Show your work. Use pictures, words, or numbers to explain your answer.

Rob drew the number line the right way. He marked it to show tenths because the fractions in the problem are in tenths. He also showed that $\frac{10}{10}$ is one whole.

He shaded 1 tenth and 3 tenths and 4 tenths because the numbers in the problem are $\frac{1}{10}$ and $\frac{3}{10}$ and $\frac{4}{10}$.

His mistake was leaving spaces between the shaded parts. When you count up on a number line, you can't skip numbers. He should have drawn this.



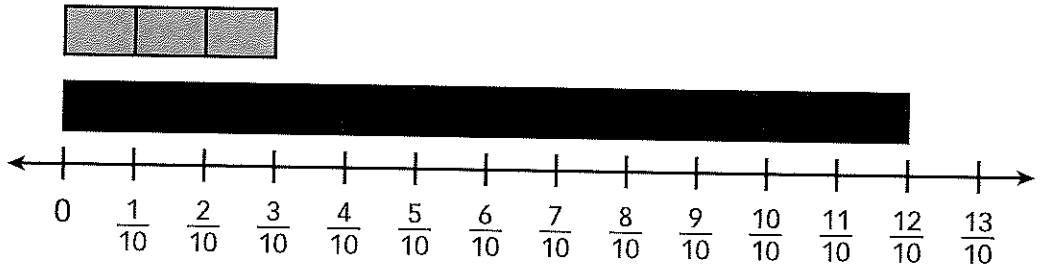
Then he would see that $\frac{1}{10} + \frac{3}{10} + \frac{4}{10} = \frac{8}{10}$.

Where does the example . . .

- answer both parts of the question?
- use a picture to explain?
- use numbers to explain?
- use words to explain?
- give details?

Solve the problem. Use what you learned from the example.

Paul drew this diagram to show $\frac{12}{10} - \frac{3}{10}$.



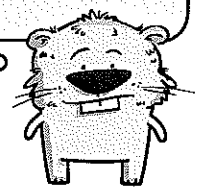
Paul says that his picture shows that $\frac{12}{10} - \frac{3}{10} = \frac{3}{10}$.

What did Paul do right? What did he do wrong?

Show your work. Use pictures, words, or numbers to explain your answer.

Did you . . .

- answer both parts of the question?
- use a picture to explain?
- use numbers to explain?
- use words to explain?
- give details?



Multi-Digit Multiplication—Skills Practice

Name: _____

Multiply 2-digit numbers.

Form A

1 21 × 35	**2** 18 × 16	**3** 24 × 12	**4** 32 × 15	**5** 12 × 37
6 11 × 77	**7** 54 × 92	**8** 64 × 35	**9** 75 × 28	**10** 43 × 15
11 42 × 96	**12** 40 × 88	**13** 57 × 64	**14** 96 × 70	**15** 61 × 54
16 82 × 27	**17** 26 × 45	**18** 82 × 34	**19** 63 × 36	**20** 35 × 27
21 20 × 16	**22** 41 × 30	**23** 98 × 20	**24** 36 × 79	**25** 28 × 49

3rd grade/Math Educational Websites and Web Resources

Title of Resource	Web Address	Description	Student Access
Khan Academy	https://www.khanacademy.org	Students will be able to get additional practice with skills in various subjects and test prep.	Students will need to sign up for a free account if they do not already have an account.
Zearn.org	**https://Zearn.org**	Students will be able to get additional practice with skills in various subjects and test prep.	Students will need to sign up for a free account if they do not already have an account.
LearnZillion	**https://Learnzillion.org**	Students will be able to get additional practice with skills in various subjects and test prep.	Students will need to sign up for a free account if they do not already have an account.
AAAmath.org	**AAAmath.org**	Students will be able to get additional practice with skills in various subjects and test prep.	A student account is not needed to access this website.
Ixl.com	**Ixl.com**	Students will be able to get additional practice with skills in various subjects and test prep.	A student account is not needed to access this website.
Adaptedmind.com	**Adaptedmind.com**	Students will be able to get additional practice with skills in various subjects and test prep.	A student account is not needed to access this website.
Hoodamath.com	**Hoodamath.com**	Students will be able to get additional practice with skills in various subjects and test prep.	A student account is not needed to access this website.