

Name _____



Let's get ready for grade 6 math!

Due: Wednesday, August 26, 2026 (1st day of school)



**Choose ONE OR MORE of the following options to complete this summer.
Doing this work will help you to feel ready to start Grade 6 math!**

☐ **Option 1:**

Complete the pages labeled **PREREQUISITE** in this packet. These pages will help you review fractions so that you will feel ready to start your first Grade 6 math unit on ratios.

☐ **Option 2:**

Complete the pages labeled **GRADE 6 WORK** in this packet. These pages are on the topic you'll be learning in your first Grade 6 math unit on ratios.

After you complete the above options, you can also work on your **iReady Math My Path** online lessons. iReady lessons do not work on a phone, so you will need access to a computer. The computers at the Chelsea Public Library are an option.

Go your school's launch page to access i-Ready:

<https://browne.chelseaschools.com/s-launcher>

<https://clark.chelseaschools.com/s-launcher>

<https://wright.chelseaschools.com/s-launcher>

Questions? Email your school's math coach.

Browne Middle School: flickj@chelseaschools.com

Clark Avenue Middle School: burucas@chelseaschools.com

Wright Science and Technology Academy: weaverj@chelseaschools.com

PREREQUISITE

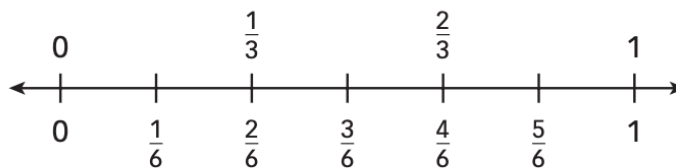
Example

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

The number line shows both thirds and sixths.

$\frac{4}{6}$ and $\frac{2}{3}$ are at the same point on the number line.

$$\frac{4}{6} = \frac{2}{3}$$



- 1 Look at the number line in the example above. Write a fraction equivalent to $\frac{2}{6}$.

$$\frac{2}{6} = \underline{\hspace{2cm}}$$

- 2 Fill in the missing fractions on the number line.



- 3 Look at the number line in problem 2.

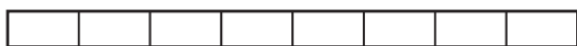
Write equivalent fractions.

$$\frac{1}{4} = \underline{\hspace{2cm}} \quad \underline{\hspace{2cm}} = \frac{4}{8} \quad \frac{3}{4} = \underline{\hspace{2cm}}$$

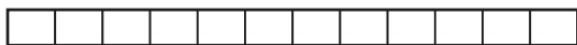
- 4 Look at the models below. Shade the models to show two fractions equivalent to $\frac{3}{4}$. Then write the fractions.



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



$\underline{\hspace{2cm}}$



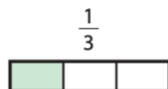
$\underline{\hspace{2cm}}$

PREREQUISITE

You can start with any fraction and change the way the whole is divided to get an equivalent fraction.

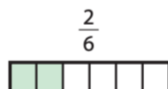
This model is divided into 3 equal parts.

The shaded section shows the fraction $\frac{1}{3}$.

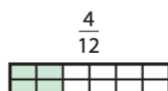


Think of 2 times
as many as $\times 2$.

$\frac{2}{6}$ has 2 times as many parts shaded and
2 times as many equal parts.



$\frac{4}{12}$ has 4 times as many equal parts and
4 times as many parts shaded as $\frac{1}{3}$.



All three models have the same shaded area. So, $\frac{1}{3}$, $\frac{2}{6}$, and $\frac{4}{12}$ are equivalent fractions.

You can also multiply the numerator and denominator of $\frac{1}{3}$ by the same number to
get an equivalent fraction.

2 times as many equal parts and 2 times as many parts shaded:

$$\frac{1 \times 2}{3 \times 2} = \frac{2}{6}$$

4 times as many equal parts and 4 times as many parts shaded:

$$\frac{1 \times 4}{3 \times 4} = \frac{4}{12}$$

5 Explain how you can find equivalent fractions.

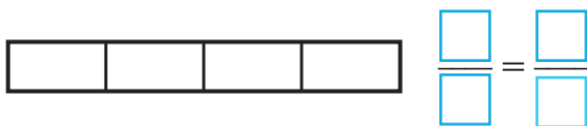
6 Shade the model to show $\frac{2}{5}$. Then show 10 equal parts and write the
equivalent fractions.



$$\frac{\square}{\square} = \frac{\square}{\square}$$

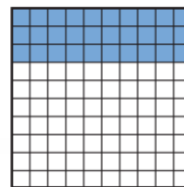
PREREQUISITE

- 7** Shade the model to show $\frac{1}{4}$. Then show 12 equal parts and write the equivalent fractions.



- 8** Draw a model to show $\frac{2}{3}$ and then divide it into a different number of parts to show an equivalent fraction.

- 9** This model shows $\frac{30}{100}$. If the model had only 10 equal parts, how many would be shaded? _____



- 10** Multiply both the numerator and denominator of $\frac{1}{4}$ by the same number to get $\frac{2}{8}$. What number did you use? Why does this make sense?
- _____
- _____

What happens if you divide both the numerator and the denominator in $\frac{2}{8}$ by 2?

- 11** To find an equivalent fraction to $\frac{6}{8}$, Beth divided by 2 to get 4 in the denominator. What should Beth do to find the numerator? What are the equivalent fractions?
- _____

PREREQUISITE

13

Fill in the missing numbers to find an equivalent fraction to $\frac{5}{6}$.

$$\frac{5 \times 2}{6 \times \square} = \frac{10}{\square}$$

- 14** Fill in the missing numbers to find two equivalent fractions to $\frac{4}{5}$.

$$\frac{4 \times \square}{5 \times 2} = \frac{\square}{10} \quad \frac{4 \times 20}{5 \times 20} = \frac{\square}{100}$$

- 15** Find a fraction equivalent to $\frac{2}{5}$ that has a denominator of 20.

Show your work. Use models, words, and numbers to explain your answer.

GRADE 6 WORK

A **ratio** is a way to compare two different quantities.

Example

Carlos has 4 tennis balls and 5 baseballs.



There are many ways to compare the numbers of balls.

Part to Part	Part to Whole	Whole to Part
tennis balls to baseballs 4 to 5 4:5 $\frac{4}{5}$	tennis balls to total balls 4 to 9 4:9 $\frac{4}{9}$	total balls to tennis balls 9 to 4 9:4 $\frac{9}{4}$
baseballs to tennis balls 5 to 4 5:4 $\frac{5}{4}$	baseballs to total balls 5 to 9 5:9 $\frac{5}{9}$	total balls to baseballs 9 to 5 9:5 $\frac{9}{5}$

You can also use the phrases “for each” and “for every” to describe ratios. For example:

4 tennis balls for every 5 baseballs.

4 tennis balls for each set of 5 baseballs.

Chris mixes 4 cups of cereal, 3 cups of pecans, and 2 cups of raisins to make a snack mix. How can you compare the quantities of each ingredient and the total amount of snack mix?

Picture



Tape Diagram

Cereal

--	--	--	--

Pecans

--	--	--

Raisins

--	--

Total mix

--	--	--	--	--	--	--	--	--

1

What are three ways to write the ratio of cups of cereal to cups of pecans?

Does the ratio of cereal to pecans compare part to part, part to whole, or whole to part? _____

GRADE 6 WORK

2

Leo blew up 7 balloons. Kathy blew up 5 balloons. Write each ratio in at least two different ways.

ratio of Kathy's balloons to Leo's balloons _____

ratio of Leo's balloons to Kathy's balloons _____

ratio of total balloons to Leo's balloons _____

3

Each class has the goal of selling 100 tickets to the school carnival. Miss Garcia's class sells 87 tickets. Mr. Carpenter's class sells 113 tickets. Write each ratio in at least two different ways.

ratio of Miss Garcia's sales to the goal _____

ratio of Mr. Carpenter's sales to the goal _____

ratio of Mr. Carpenter's sales to Miss Garcia's sales _____

4

Kaya received these ribbons at swim meets. What is the ratio of first-place ribbons to third-place ribbons?



5

Donnie's dog had a litter of puppies. He notices that 2 are brown, 1 is white, and 3 are spotted. What is the ratio of total puppies to brown puppies? Circle the letter of the correct answer.

- A** 2:6
- B** 2:4
- C** 4:2
- D** 6:2

Anya chose **A** as the correct answer. How did she get that answer?

GRADE 6 WORK

Yolanda uses 4 cups of nuts and 2 cups of dried fruit to make trail mix.

One way to draw the tape diagram:	Another way to draw the tape diagram:												
Nuts <table border="1"><tr><td></td><td></td><td></td><td></td></tr></table> Dried Fruit <table border="1"><tr><td></td><td></td></tr></table>							Nuts <table border="1"><tr><td></td><td></td></tr></table> <table border="1"><tr><td></td><td></td></tr></table> Dried Fruit <table border="1"><tr><td></td></tr></table> <table border="1"><tr><td></td></tr></table>						

A related **rate** is an equivalent ratio that compares the first quantity in a ratio to only one of the second quantity. In this example, you know that the amount of nuts is double the amount of dried fruit. So, what if you want the same kind of mix but you only have 1 cup of dried fruit? How many cups of nuts would you use?

Think: $4 : 2$ is the same as $2 : 1$.

The **unit rate** is the number in a rate that is being compared to 1.
In this example, the unit rate of nuts to fruit is 2.

6 What is the difference between a ratio and its related rate and unit rate?

7

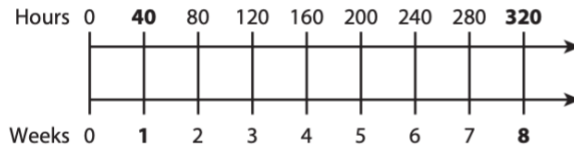
Put It Together A recipe uses 3 cups of flour and 2 cups of sugar.

Part A Write the ratio of flour to sugar. Then write the related rate and unit rate.
Be sure to label your answers.

Part B Now write the ratio of sugar to flour. Then write the related rate and unit rate. Be sure to label your answers.

Example

The double number line below shows the relationship between the numbers of hours and weeks Linda works. Linda worked 320 hours in 8 weeks.

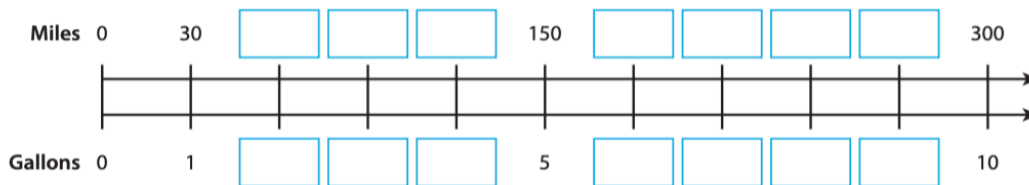


The ratio of hours to weeks is 320 to 8.

The rate is 40 hours to 1 week. The unit rate is 40.

8

A car can travel 300 miles on 10 gallons of gas. The ratio is 300 miles to 10 gallons.



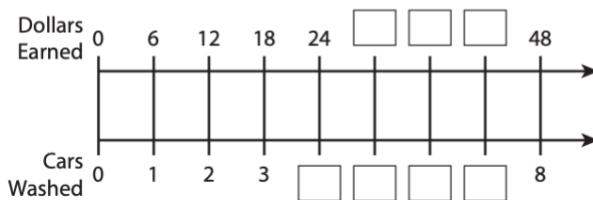
Fill in the missing numbers on both number lines.

What is the ratio of miles to gallons? _____

What is the unit rate of miles to gallons? _____

9

The double number line shows the relationship between dollars earned and cars washed at a school fundraiser. Students earned 48 dollars washing 8 cars. The ratio of dollars earned to cars washed is 48 : 8.



What is the unit rate of dollars earned to cars washed? _____