

# Diagnostic Test

7th Grade week 6

Write each ratio as a fraction in simplest form.

High School Enrollment	
Freshmen	125
Sophomores	130
Juniors	120
Seniors	115

1. freshmen : sophomores

1. \_\_\_\_\_

2. freshmen : juniors

2. \_\_\_\_\_

3. freshmen : seniors

3. \_\_\_\_\_

4. sophomores : freshmen

4. \_\_\_\_\_

5. sophomores : seniors

5. \_\_\_\_\_

6. juniors : freshmen

6. \_\_\_\_\_

7. juniors : seniors

7. \_\_\_\_\_

8. seniors : freshmen

8. \_\_\_\_\_

9. seniors : sophomores

9. \_\_\_\_\_

10. seniors : juniors

10. \_\_\_\_\_

Determine whether the ratios are equivalent.  
Explain.

11. 12 out of 36 students ate an apple,  
4 out of 12 students ate an apple

11. \_\_\_\_\_

12. 6 out of 10 bankers agree,  
7 out of 11 bankers agree

12. \_\_\_\_\_

13. 4 MP3 players to 8 cell phones,  
7 MP3 players to 14 cell phones

13. \_\_\_\_\_

# Pretest

Find each unit rate. Round to the nearest hundredth if necessary.

1. 50 miles in 2 hours

1. \_\_\_\_\_

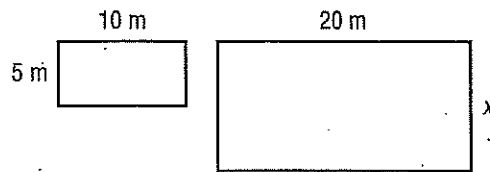
2. 21 laps in 7 minutes

2. \_\_\_\_\_

3. \$10.50 for 3 pounds

3. \_\_\_\_\_

4. Find the value of  $x$  in the pair of similar figures.



4. \_\_\_\_\_

Solve each proportion.

5.  $\frac{p}{7} = \frac{8}{28}$

5. \_\_\_\_\_

6.  $\frac{13}{26} = \frac{39}{r}$

6. \_\_\_\_\_

7.  $\frac{2}{3} = \frac{n}{15}$

7. \_\_\_\_\_

8.  $\frac{4}{x} = \frac{24}{42}$

8. \_\_\_\_\_

9. **JOBS** Miley earns \$10 per hour babysitting. Is the amount of money earned proportional to the number of hours she spends babysitting?

9. \_\_\_\_\_

10. **FOOD** Pizzas are \$10 each plus a \$2 delivery fee. Is the cost proportional to the number of pizzas ordered?

10. \_\_\_\_\_

**Vocabulary Test**

constant of proportionality

equivalent ratios

rate

constant rate of change

linear relationship

rate of change

cross products

nonproportional

slope

derived unit

proportion

unit rate

direct variation

proportional

**Choose the correct term or phrase to complete each sentence.**

1. If two quantities are (proportional, nonproportional) they have a constant ratio.

1. \_\_\_\_\_

2. A proportion is an equation stating that two ratios are (equivalent, of different units).

2. \_\_\_\_\_

3. Two ratios that have the same value are called (scale factors, equivalent ratios).

3. \_\_\_\_\_

4. To determine whether two ratios form a proportion, you can find their (cross products, unit rates).

4. \_\_\_\_\_

5. A linear relationship has (constant rate of change, variable rate of change).

5. \_\_\_\_\_

6. The rate that describes how one quantity changes in relation to another is called the (derived unit, rate of change).

6. \_\_\_\_\_

7. When two variable quantities have a constant ratio, their relationship is called a (direct variation, function).

7. \_\_\_\_\_

**Define each term in your own words.**

8. slope

8. \_\_\_\_\_

9. unit rate

9. \_\_\_\_\_

Khan Academy Notes

Unit \_\_\_\_\_

Name \_\_\_\_\_

Date \_\_\_\_\_

Topic \_\_\_\_\_

Questions you may have????????????????





Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Song or Video Note-Taking Chart

Song Name: \_\_\_\_\_

Important word, term or event	Line from song that includes word, term or event	Definition of word/term or Explanation of event
1. _____	↑	↑
2. _____	↑	↑
3. _____	↑	↑
4. _____	↑	↑
5. _____	↑	↑
6. _____	↑	↑
7. _____	↑	↑
8. _____	↑	↑
9. _____	↑	↑
10. _____	↑	↑