

Name: _____ Pd: 3 Date: 11/7/17

Accelerated Math 7
Chapter 5 Study Guide

CH 5.1-Ratios

Express each ratio as a fraction in simplest form.

1. 6 red cars to 4 blue cars.
2. 18 ounces to 3 cups (make sure labels are equal)

CH 5.2-Unit Rates

Express each rate as a unit rate. Round to the nearest tenth or to the nearest cent, if necessary.

3. \$25.97 for 8 boxes
4. 400 meters in 5 minutes
5. \$175 for 4 concert tickets
6. 125 miles in 200 minutes

7. An eight pack of juice boxes costs \$4.79, and a twelve pack of juice boxes costs \$6.59. Which is a better buy? Explain.

CH 5.3-Complex Fractions and Unit Rates

Simplify each complex fraction using the method in your notes!

8. Noreen can walk $1\frac{1}{10}$ miles in $\frac{1}{3}$ hours. Find her average speed in miles per hour.

9. Write $66\frac{2}{3}\%$ as a fraction in simplest form

10. Write $6\frac{1}{2}\%$ as a fraction in simplest form.

CH 5.4-Converting Rates

Complete each conversion. Round to the nearest hundredth if necessary. Use dimensional analysis-this means show the conversion factor and cancel out units no longer needed.

11. 20 m \approx _____ yd

12. 7 in. \approx _____ cm

13. 3 q \approx _____ L

14. 12 oz \approx _____ g

15. 4 L \approx _____ gal

16. 26 cm \approx _____ in.

17. A runner runs 2 miles in 9.56 minutes. How many meters per second is this?

18. A family drives their car 135 miles in 3 hours. How many kilometers per hour is this?

CH 5.5-Proportional and Nonproportional Relationships

Determine whether the cost is proportional to the number of books purchased. If the relationship is proportional, find the constant of proportionality. Explain your reasoning.

19.

Books	1	2	3	4
Cost (\$)	8	16	24	32

20.

Books	2	4	6	8
Cost (\$)	2	5	7	10

21. A customer at the ring toss booth gets 8 rings for \$2. Find the constant of proportionality. Write an equation relating the cost to the number of rings. At this same rate, how much would a customer pay for 11 rings? for 20 rings?

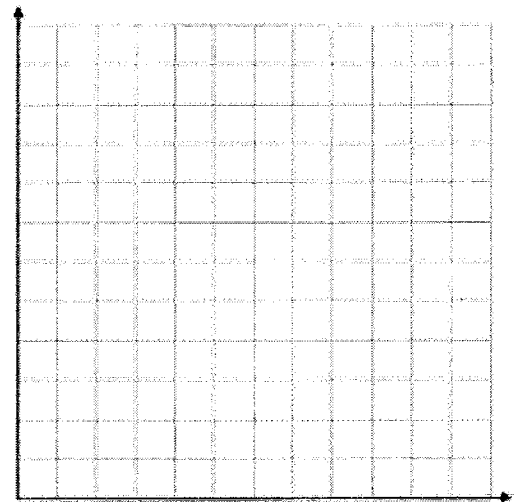
CH 5.6-Graphing Proportional Relationships

22. Determine whether the relationship is proportional by graphing on the coordinate plane. Explain your reasoning.

23. The number of squirrels is proportional to the number of trees. A graph of the relationship includes the points (0,0), (3,9), and (5,15).

a. Find and interpret the constant of proportionality.

b. Explain what the points (0,0), (3,9), and (5,15) represent.



CH 5.7-Solving Proportions

Solve each proportion. You must show your work.

24. $\frac{15}{a} = \frac{5}{4}$

25. $\frac{m}{6} = \frac{18}{15}$

26. $\frac{28}{24} = \frac{d}{12}$

27. A homeowner whose house is assessed for \$120,000 pays \$1800 in taxes. At the same rate, what is the tax on a house assessed at \$135,000?

5.8 - Scale Drawings and Model

For questions 28-30 use the table and the following information....On the scale drawing of a museum, the scale is 0.5 inch = 10 feet. Find the actual length of each gallery. Show your work!

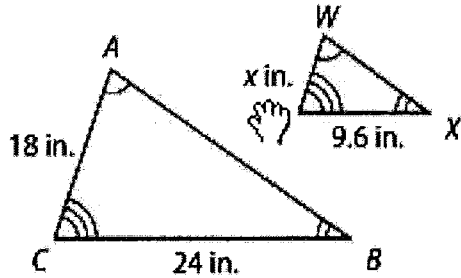
	Gallery	Drawing Length
28.	Modern Art	6 in.
29.	Renaissance	4.25 in.
30.	Egypt	7.5 in

31. The length of a highway is 900 miles. If 0.5 inch on a map represents 50 miles, what is the length of the highway on the map?

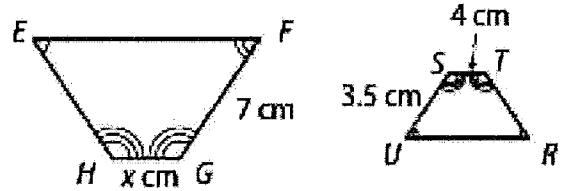
CH 5.9-Similar Figures

The figures are similar. Determine each missing measure.

2.



33.



34. A mosaic is created using rectangular blocks. Block A has a length of 5 centimeters and a width of 2.5 centimeters. Block B is similar to block A and has a length of 7 centimeters. What is the width of block B?

35. Parker enlarges a rectangular photograph to make a poster that is similar to the photograph. The photograph is 4 inches wide and 6 inches long. The poster is 51 inches long. What is the width of the poster?

CH 5.10-Indirect Measurement

36. At 7 feet 8 inches, the world's tallest woman casts a 46-inch shadow. At the same time, the world's shortest woman casts a 15.5-inch shadow. How tall is the world's shortest woman?

37. The largest known pyramid is the Pyramid of Khufu. At a certain time of day, a vertical yardstick casts a shadow of 1.5 feet long, and the pyramid casts a shadow 241 feet long. How tall is the pyramid?

38. In the figure below, $\triangle ABE \approx \triangle ACD$. What is the distance across the pond?

