

Name: _____ Period: _____

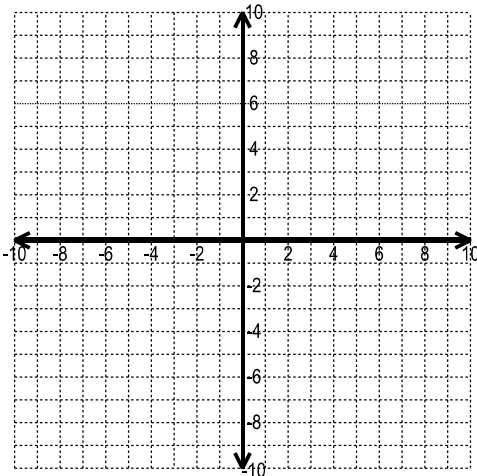
Week 18 Homework Packet – 7th Grade Math Honors

ASSIGNMENT DUE TUESDAY, DECEMBER 13, 2016

Unit 3, Chapter 5 – Ratio, Proportion, and Similar Figures

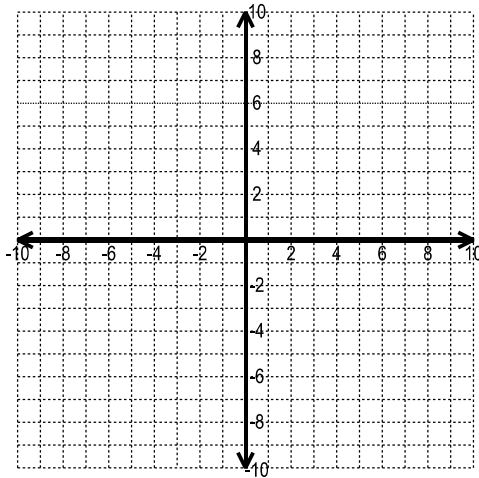
For problems 1–3, create a table of the proportional relationship described, then graph.

1) A bottle of soda costs \$2. Use the x-axis for number of bottles and the y-axis for the cost in dollars.



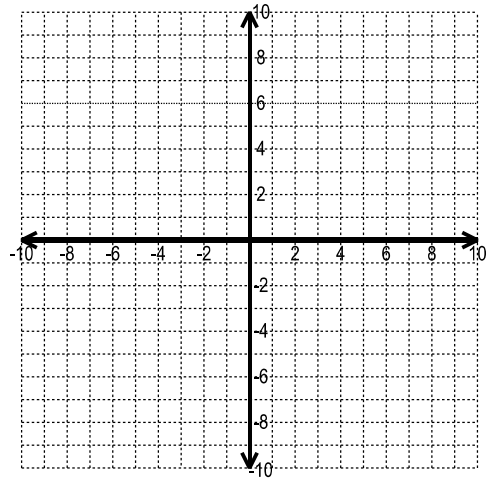
Bottles						
Cost in Dollars						

2) A scuba diver starts at the surface of the water and dives 1 foot per second. Use the x-axis for the number of seconds and the y-axis for the diver's position relative to sea level.



Seconds						
Position						

3) The cost of sugar is \$1.50 per pound. Use the x-axis for pounds of sugar and the y-axis for total cost.



Pounds of Sugar						
Cost in Dollars						

Skills Review

4) If there are 640 acres in a square mile and 4840 square yards in one acre, use dimensional analysis to show how many square yards in area is the island nation of Nauru, which is about 8.1 square miles.

5) The escape velocity of earth is approximately 11.2 kilometers per second. That means, if you launch an object upwards at that speed, it will never land. If there are 1.6093 kilometers per mile, what is that speed in miles per hour? Use dimensional analysis to solve.

SCORE
/4

WEEK SCORE
/12

Stamp

Name: _____

Period: _____

7th Grade Math Honors

SCORE

/4

Stamp

ASSIGNMENT DUE WED/THU, DECEMBER 14/15, 2016

Unit 3, Chapter 5 - Ratio, Proportion, and Similar Figures

Solve the following proportional equations:

1) $\frac{x}{8} = \frac{3}{4}$

2) $\frac{m}{10} = \frac{4}{5}$

3) $\frac{y}{12} = \frac{1}{3}$

4) $\frac{10}{x} = \frac{2}{3}$

5) If a store sells 3 pints of ice cream for \$6, how much will it cost to buy 5 pints of ice cream?

6) To get the right shade of green, a painter mixes 2 cans of blue paint for every 3 cans of yellow paint. If the painter needs to make 30 gallons of green paint, how many gallons of blue paint should be used in the mix?

7) For every left-handed person, there are about nine right-handed people. In a room of 60 people, on average how many right-handed people will it contain?

8) To determine the number of deer in a forest, a forest ranger tags 280 and releases them back into the forest. Later, 405 deer are caught, out of which 45 of them are tagged. Estimate how many deer are in the forest.

9) In the year 2000, there were 8.7 deaths per 1000 residents in the United States. If there were 281,421,906 residents in the U.S. during 2000, how many people died that year? (Round to the nearest whole number)

10) Mary reduced the size of a painting to a width of 3.3 in. What is the new height if it was originally 32.5 in tall and 42.9 in wide? (Round to one decimal place.)

11) Asanji took a trip to Mexico. Upon leaving he decided to convert all of his Pesos back into dollars. How many dollars (rounded to the nearest penny) did he receive if he exchanged 42.7 Pesos at a rate of \$5.30 = 11.1 Pesos?

Name: _____

Period: _____

7th Grade Math Honors

SCORE

/4

Stamp

ASSIGNMENT DUE FRIDAY, DECEMBER 16, 2016

Unit 3, Chapter 5 - Ratio, Proportion, and Similar Figures

1) The Statue of Liberty is approximately 150 feet tall. If you were making a scale drawing and needed the drawing to be 10 inches tall, what would the scale need to be?

2) A model airplane has a wingspan of 23 inches. If the model is based off of a plane that has a wingspan of 92 feet, what is the scale?

3) Each side of The Pentagon in Alexandria, VA is about 280 meters long. If you were to make a poster that has a scale of 1":14 m, what would the length of one side of the building be on the poster?

4) A scale drawing of a house shows the master bedroom to be 12 feet long. If the drawing is 3 inches long and $3\frac{3}{4}$ inches wide, how wide will the master bedroom be?

Skills Review

5) If there are 3.28 feet in one meter and 1852 meters in one nautical mile, how many feet are in 10 nautical miles? Use dimensional analysis to solve. You will need a calculator.

6) A secretary can type 153 words in 3 minutes. How many words can the same secretary type in 10 minutes?

7) A store is selling two-liter bottles of soda. The sign says "4 for \$5." If you are buying 10 bottles for a party, how much will they cost in total?

8) A world-class marathon runner runs a marathon at a steady pace. After a half hour, he has run six miles. At this pace, how long will it take for him to run the entire 26.2 mile marathon? (Write your answer in hours and minutes.)