Name: _____ Date: 5/5/15

Mathematics Period 3 Ms. Wilson

Proportions
Classwork

For questions 1-4, solve for the missing term in each proportion.

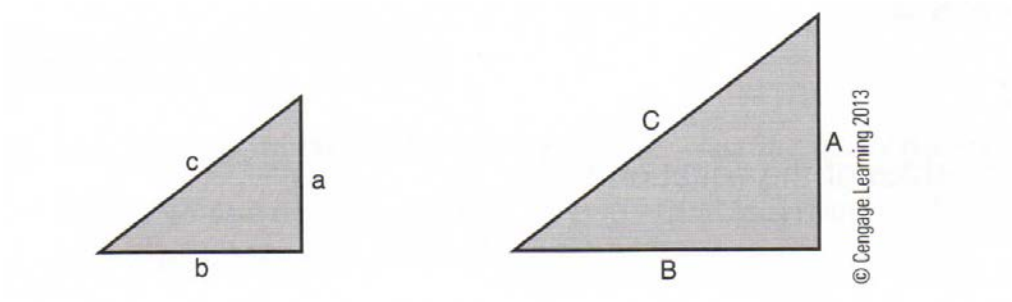
1.) 2 : 3 = 10 : x

2.) A : 5 = 36 : 20

3.) 4 : Y = 8 : 30.5

4.) $4\frac{1}{2} : 19\frac{1}{8} = ? : 38\frac{1}{4}$

The two triangles below are similar. This means that pairs of corresponding sides are proportional; for example a/b = A/B. Use these figures to solve problems 5, 6, and 7.



5.) Given that B = 27mm, b = 9mm, and a = 5mm, what is A in millimeters?

6.) Given that a = 4 inches, c = 9 inches, and C = 42.75 inches, what is A in inches?

7.) In ΔABC, B is 145 centimeters, and C is 180 centimeters. In Δabc, b is 29 centimeters. What is c, in centimeters?

8.) A CAD operator realizes that it takes 19 minutes to plot a drawing. Working at the same rate, how will it take the operator to plot eight hard copies of the same drawing?

9.) In two weeks, five machinists assembled 12 machines. Working at the same rate, how many machinists were needed to assemble 60 machines in the same amount of time?

10.) Two gears have a gear ratio of 2.8 : 1. If the larger gear has 98 teeth, how many teeth does the smaller gear have?

11.) A CAD operator realizes that it takes her 40 minutes to plot a set of six drawings.

a.) Working at the same rate, how many sets of six drawings can she plot in 480 minutes?

b.) How many drawings can she plot in 480 minutes?

12.) A structural drafter observes that a metal joint that is 8 feet long required 40 rivets. How many rivets are required for a joint that is 5 feet long?

Name: _____ Date: 5/5/15
Mathematics Period 3 Ms. Wilson

Proportions
Homework – Due 5/6/15

1.) If 10 CAD drafters can produce an average of 24 drawings in four days, how many CAD drafters, working at the same rate, will it take to average 36 of the same set of drawings in four days?

2.) In three weeks, six workers can assemble 32 products. Working at the same rate, how many workers are needed to assemble 544 products in the same amount of time?

3.) A CAD drafter observes that it takes 27 seconds to print seven drawings. At the same rate, how many minutes and seconds would it take to prince 42 drawings?

4.) Assume that a freehand sketch can be made in 1/10 of the time it takes to make an instrument drawing. If an instrument drawing takes 2½ hours to complete, how many minutes should a freehand sketch take?

5.) If 1440 wedge blocks can be stamped out in 1 hour, determine how many blocks can be made at the same rate in 45 minutes and 15 seconds.