

Quiz 2.4

1) The formula $y = 7x$ shows the relationship between the number of weeks and the number of days on our calendar.

a. Which variable would represent the number of weeks? _____ (1 point)

b. If $x = 14$, then $y =$ _____. (1 point)

Show your work properly. (2 points)

c. If $y = 60$, then $x =$ _____. (1 point)

Show your work properly. (2 points)

2) There are three teaspoons in one tablespoon. Using t for the number of teaspoons and T for the number of tablespoons, write an equation showing the relationship between the two. (1 point)

3) In a short sentence explain what step or steps are needed to solve the proportion (2 points) and then find its solution (1 point).

a. $\frac{140 \text{ miles}}{3 \text{ hours}} = \frac{x \text{ miles}}{4 \text{ hours}}$

b. $\frac{1000 \text{ words}}{x \text{ minutes}} = \frac{102 \text{ words}}{1 \text{ minute}}$

4) For each of the following problems, solve (1 point) *and* show your dimensional analysis work properly (2 points).

a. How many Woos are equal to 60 Zorgs?

2 Zorgs	=	1 Yum
3 Yums	=	1 Velba
5 Velbas	=	1 Woo
7 Woos	=	1 Hoo
11 Frank	=	1 Furter

b. 4 Woos = _____ Hoos

c. Change 15 Velbas per Frank to Woos per Furter.

5) Write a proper proportion (2 points) and solve (1 point)

a. Abe weighs 140 pounds. Using 1 kilogram = 2.2 pounds, find Abe's weight in kilograms.

b. Abe is 67 inches tall. What is his height in centimeters?
(2.54 cm = 1 in)