

Name _____
Algebra

Date ____/____/____
Mr. Towne

Quiz 2.4

1) The formula $y = 52x$ shows the relationship between the number of weeks and the number of years on our calendar.

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

b. If $x = 12$, then $y =$ _____. (1 point)

Show your work properly. (2 points)

c. If $y = 13$, then $x =$ _____. (1 point)

Show your work properly. (2 points)

2) There are four pecks in one bushel. Using p for the number of pecks and b for the number of bushels, 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. $\frac{140 \text{ miles}}{3 \text{ hours}} = \frac{100 \text{ miles}}{x \text{ hours}}$

b. $\frac{x \text{ words}}{4 \text{ minutes}} = \frac{306 \text{ words}}{3 \text{ minutes}}$

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 7 Velbas?

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

b. 6 Woos = _____ Zorgs

c. Change 20 Yums per Frank to Zorgs per Furter.

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

a. Abe weighs 160 pounds. Using 1 kilogram = 2.2 pounds, find Abe's weight in kilograms.

b. Abe is 175 centimeters tall. What is his height in inches?
(2.54 cm = 1 in)