

PRACTICE: Ratios and Proportions

Name: _____

Date: _____

Show your work!

1. Indicate whether the ratios are equivalent (E) or not equivalent (N):

a) 2:3 and 4:9 _____

b) 1:2 and 2:1 _____

c) 5:8 and 15:32 _____

d) 4:1 and 20:5 _____

2. Find the unknown value in each proportion:

a) $n:5 = 4:20$ $n =$ _____

b) $15:x = 45:6$ $x =$ _____

c) $3:2 = 15:a$ $a =$ _____

d) $18:24 = m:4$ $m =$ _____

3. A mechanic mixes oil with gas to lubricate the cylinders in a motorcycle engine. He uses one part oil and 32 parts gas. What is the ratio of oil to gas? _____

4. Some conveyor belts have two pulleys. If one pulley has a diameter of 45 cm and another has a diameter of 20 cm, what is the ratio of the smaller diameter to the larger diameter? _____

5. What is the ratio of 250 milliliters of grape juice concentrate to one liter of water (hint: there are 1000 milliliters in one liter)? _____

6. Jonah can mow Mrs. Fraser's lawn in 45 minutes. Jeremie can mow the same lawn in one hour and 15 minutes. What is the ratio of Johah's to Jeremie's work? _____

7. For a silk screening project, Jan mixes a shade of orange ink at a ratio of red ink to yellow ink of 2:3 and yellow ink to white ink of 3:1.
a) How many milliliters of red ink would she need if she used 750 milliliters of yellow ink? _____ ml

b) How many milliliters of yellow ink would she need if she used 500 milliliters of white ink? _____ ml

8. The ratio of flour to shortening in a recipe for piecrust is 2:1. Today's orders call for the baker to make 30 cups of piecrust.

a) How many cups of flour will the baker use? _____ cups

b) How many cups of shortening will the baker use? _____ cups

9. Tristan sells something he claims to be an invisibility potion. The potion is made up of three parts bat sweat to 10 parts chicken drool. Tristan sells the potion in 45 liter drums.

a) Rounded to one decimal place, how many liters of bat sweat is in the drum? _____ liters

b) Rounded to one decimal place, how many liters of chicken drool is in the drum? _____ liters

10. Last month Crazy Carl's Reliable Car Sales earned total revenue of \$500 000 from new car sales (\$200 000), used car sales (\$100 000), parts (\$75 000), and the service department.

a) How much did the service department earn? \$ _____

b) What is the ratio of service department revenue to parts revenue? _____

c) What is the ratio of service department revenue to total revenue? _____

d) What is the ratio of used car sales revenue to new car sales revenue? _____

e) What is the ratio of all car sales to all other sources of revenue? _____