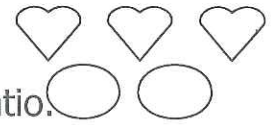
PRACTICE QUIZ: Rates, Ratios, and Unit Analysis

NAME Key



For 1 & 2, use the diagram at the left to identify the given ratio.

1. hearts to circles #1 answer: 3 to 2

2. Total shapes to hearts #2 answer: 5 to 3

For 3 & 4, identify each ratio in simplest form. Show your work.

3. 2 min : 30 seconds

120sec : 30sec

#3 answer: 4 : 1

4. 32 inches to 8 feet

32 in to 96 in
÷32 ÷32

#4 answer: 1 to 3

For 5 & 6, identify each unit rate. Show your work. Don't forget units and please use a horizontal — fraction bar!

5. 204 words in 6 min.

34 102 204 wrds
6 min

#5 answer: 34 wrds / min

6. $10.00 for 50 cookies

$10 1
50 cookies 5

#6 answer: $.2 / cookie

For 7–10, use unit analysis. Show your work. Don't forget units in your answer!

7. 5 yds is how many in?

5 yds / 1 · 3 ft / 1 yd · 12 in / 1 ft

#7 answer: 180 in

8. 144 oz is how many lbs?

72 144 oz / 1 · 1 lb / 816 oz

#8 answer: 9 lbs

9. 21 lbs is how many oz?

$\frac{21\text{-lbs}}{1} \cdot \frac{16\text{-oz}}{1\text{-lb}}$

#9 answer: 336 oz

10. 93 ft is how many yds?

$\frac{31\text{ yds}}{1} \cdot \frac{1\text{ yd}}{3\text{ ft}}$

#10 answer: 31 yds

For 11 & 12, use unit analysis to find the equal rate. Show your work. Don't forget units and please use a horizontal —— fraction bar!

11. $\frac{10{,}560\ ft}{2\ hr}$ is how many $\frac{mi}{hr}$?

$\frac{1\ 5{,}280\text{ ft}}{10{,}560\text{ ft}} \cdot \frac{1\text{ mi}}{2\text{ hr}} \cdot \frac{1\text{ mi}}{5{,}280\text{ ft}}$

#11 answer: $\frac{1\text{ mi}}{\text{hr}}$

12. $\frac{1\ mi}{4\ \text{min}}$ is how many $\frac{mi}{hr}$?

$\frac{1\text{ mi}}{4\text{ min}} \cdot \frac{15}{30}\frac{60\text{ min}}{1\text{ hr}}$

#12 answer: $\frac{15\text{ mi}}{\text{hr}}$