

Problem Solving with Dimensional Analysis

Name _____ Date _____

Make the following conversions.

1. 3 days to minutes
2. 6 gallons to cups
3. 14,000 grams to Hectograms
4. 12,672 inches to miles

Solve the following word problems. Show all of your work.

5. The owner of a lawn mowing business wants to know how much time, on average, his workers spend mowing a lawn. Last week, 7 employees each worked a 6-hour shift. In all, they mowed 42 lawns. Which is the most appropriate unit in which to calculate an answer to his question?
 - A. lawns per employee
 - B. lawns per day
 - C. Employees per lawn
 - D. Hours per lawn
6. Zoe drinks 40 cups of coffee. Zany drinks 22 pints of coffee. Zelly drinks 9 quarts of coffee. Who drank the most coffee?
7. You have a pitcher that can hold 2.75 quarts of liquid. You have a bowl that is currently holding 11.25 cups of punch. Will all of punch fit into the pitcher?

8. In 1 hour, Robert ran 5.75 km and Marco ran 4,073 meters. Who ran faster?

9. Trent purchases 44 euros worth of souvenirs while on vacation in France. If \$1 U.S. = 0.678 euros, find the cost of the souvenirs in U.S. dollars. Round to the nearest cent.

10. Jenna and Jessica decided to run the Disney Marathon. Jenna finished the marathon in 238 minutes while Jessica completed the marathon in 14,100 seconds. Who finished the race first?

11. One ball weighs 3,250 grams. If a box contains 15 balls and you know the weight of the box is 0.17 kilograms, what is the total weight of the box in kilograms?

12. A dog park has a length of 4 kilometers and a width of 3 kilometers. Find the area of the dog park in miles if you know that 1.6 kilometers = 1 mile.

A. 7.5 square miles

B. 19.2 square miles

C. 8.75 square miles

D. 4.69 square miles