

## Problem set - Dimensional analysis

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Use dimensional analysis to answer the questions. Show all of your work. You may use a calculator and notes.

There are 12 inches in one foot, 3 feet in one yard, and 1760 yards in one mile. One meter is 39.37 inches.

1. How many inches is 16.5 feet?
2. How many inches is 2.5 yards?
3. How many feet is 1.4 miles?
4. How many yards is 216 inches?
5. To the nearest hundredth of a meter, how many meters is 408 inches?
6. To the nearest meter, how far is 3.1 miles?

There are sixteen ounces in one pound, and two thousand pounds in one ton. A kilogram is 2.205 pounds.

7. How many pounds is  $\frac{1}{4}$  ton?

8. How many tons is 8,000 pounds?

9. How many ounces is two kilograms?

There are eight fluid ounces in a cup, two cups in a pint, two pints in a quart, and four quarts in a gallon. One liter is 33.81 fluid ounces.

10. How many ounces is three cups?

11. How many pints is one gallon?

12. How many quarts is 256 ounces?

13. How many liters is 16 gallons?