Dimensional Analysis Practice Name:_____

Reflection and Self-Assessment

Part 1: Circle the statement that best describes how you completed the practice:

- I answered all questions without using the online solutions. I checked my answers against the key at the back of the practice and was able to determine my mistakes and correct them without referring to the online solutions.

- I answered most questions correctly without using the online solutions. I used the online solutions to help me with some questions and was able, with help from the online solutions, to understand every question and answer them correctly.

- I used the online solutions to help me with most of the questions. I was able, with help from the online solutions, to understand each question and answer them correctly.

- Even using the online solutions, I was not able to fully understand the solution to some problems. The questions I had trouble with were:

  _____

- I did not attempt all the questions on the practice.

Part 2: Circle the statement that best describes your confidence in answering questions of this type in the future.

- I am confident I can answer nearly any question of this type correctly without using notes or other assistance beyond a conversion sheet.

- I am confident I can answer **MOST** questions of this type correctly without using notes or other assistance beyond a conversion sheet.

- I am **NOT** confident I can answer most questions of this type correctly without using notes or other assistance.

Dimensional Analysis Practice

Name:_____

Show your work for each and circle your answer. Be sure to answer to the correct number of significant figures and write units with your answers.

1. 5.63 grams to kilograms

2. 2.69 feet to metres

3. 6300 mm to inches

4. 252.26 miles to cm

5. 0.0050 miles to mm

Dimensional Analysis Practice Name:_____

6. 2.14 miles per hour to miles per day

7. 2.14 miles per hour to km per hour

8. 2.14 miles per hour to km per day

9. 953 grams per second to pounds per hour

10. 5.23×10^7 metres per second to miles per hour

Dimensional Analysis Practice Name:_____

11. 2.5 square feet into square inches

12. 9.00 square cm into square metres

13. 950 cm^2 into square yards.

14. 52 000 cm^3 into m^3.

15. 405 000 grams per cm^2 into pounds per square inch

Dimensional Analysis Practice Name:_____

	Common Imperial	Imperial and SI	SI
Length	1 mile = 1760 yards 1 mile = 5280 feet 1 yard = 3 feet 1 yard = 36 inches 1 foot = 12 inches	1 mile ≈ 1.609 km 1 yard = 0.9144 m 1 foot = 30.48 cm 1 inch = 2.54 cm	1 km = 1000 m 1 m = 100 cm 1 cm = 10 mm
Mass (Weight)	1 ton = 2000 pounds 1 pound = 16 ounces	2.2 pounds ≈ 1 kg 1 pound ≈ 454 g 1 ounce ≈ 28.35 g	1 t = 1000 kg 1 kg = 1000 g
Volume	1 gallon = 4 quarts 1 gallon (UK) ≈ 1.2 gallons (US) 32 fluid ounces = 1 quart	1.06 quarts (US) ≈ 1 L 0.26 gallons (US) ≈ 1 L 3.52 fluid ounces (UK) ≈ 100 mL 3.38 fluid ounces (US) ≈ 100 mL	
Common Abbreviations	mile = mi yard = yd feet = ' or ft inch = " or in ton = tn pound = lb ounce = oz fluid ounce = fl oz		kilometre = km metre = m centimetre = cm millimetre = mm tonne (metric ton) = t gram = g litre = L millilitre = mL

Dimensional Analysis Practice Name:_____

Answer Key

1) 0.00563 kg **OR** 5.63×10^{-3} kg	2) 0.820 m	3) 250 inches	4) 4.0597×10^{7} cm	5)8.0×10^{3} mm
6) 51.4 miles per day	7) 3.44 km/hr	8) 82.6 km/day	9) 7560 pounds/hr **OR** $7.56 \times 10^{3} \frac{pound}{hr}$	10) 1.17×10^{8} miles per hour
11) 360 in^2 **OR** 360 sq in	12) 0.000900 m^2 **OR** 9.00×10^{-4} m^2	13) 0.11 yd^2 **OR** 0.11 sq yd	14) 0.052 m^3	15) 5760 pounds per square inch **OR** $5.76 \times 10^{3} \frac{\text{pounds}}{\text{in}^2}$