

Dimensional Analysis

Use dimensional analysis to convert each of the following measurements to its equivalent in the units given.

1. 14 cm to meters
2. 31 g to milligrams
3. 116.5 m to kilometers
4. 285.9 m to kilometers
5. 0.006394 km to centimeters
6. 8.4×10^{-6} kg to centigrams
7. 1.47×10^5 mm to kilometers
8. 4.7 kg to pounds
9. 138.4 oz to grams
10. 65.5 km to miles
11. 23.6 ft to centimeters
12. 2.36 ft to centimeters
13. 13.6 L to U.S. liquid quarts
14. 20.6 km/hr to miles per hour
15. 0.058 m/s to centimeters per second
16. 3.49 km/hr to miles per hour
17. 14.7 g/cm^3 to pounds per cubic foot
18. 7.3×10^{-4} mL/s to cubic feet per day
19. $8.05 \times 10^5 \text{ g/cm}^3$ to kilograms per liter
20. $3.42 \times 10^3 \text{ lb/ft}^2$ to grams per square centimeter

CHEMISTRY PROBLEMS

1. .014 m
2. 31,000 mg
3. 0.1165 km
4. 0.002859 km
5. 639.4 cm
6. 0.84 cg
7. 0.147 km
8. 10.1 lb (10.4 lb)
9. 3924 g
10. 40.7 mi
11. 719 cm
12. 0.273 d
13. 14.4 liq qt
14. 12.8 mi/hr
15. 5.8 cm/s
16. 0.969 m/s
17. 918 lb/ft³
18. 2.23×10^{-3} ft³/d
19. 8.05×10^5 kg/L
20. 1670 g/cm²