

74. Make the following conversions:

- a. 157 cs to seconds
- b. 42.7 L to milliliters
- c. 261 nm to millimeters
- d. 0.065 km to decimeters
- e. 642 cg to kilograms
- f.  $8.25 \times 10^2$  cg to nanograms

77. Complete this table so that all the measurements in each row have the same value.

mg	g	cg	kg
a. _____	b. _____	28.3	c. _____
$6.6 \times 10^3$	d. _____	e. _____	f. _____
g. _____	$2.8 \times 10^{-4}$	h. _____	i. _____

79. Rank these numbers from smallest to largest.

- a.  $5.3 \times 10^4$
- b.  $57 \times 10^3$
- c.  $4.9 \times 10^{-2}$
- d. 0.0057
- e.  $5.1 \times 10^{-3}$
- f.  $0.0072 \times 10^2$

80. Comment on the accuracy and precision of these basketball free throw shooters.

- a. 99 of 100 shots are made.
- b. 99 of 100 shots hit the front of the rim and bounce off.
- c. 33 of 100 shots are made; the rest miss.

82. Which would melt first, germanium with a melting point of 1210 K or gold with a melting point of  $1064^\circ\text{C}$ ?

87. The density of dry air measured at  $25^\circ\text{C}$  is  $1.19 \times 10^{-3} \text{ g/cm}^3$ . What is the volume of 50.0 g of air?

88. What is the mass of a cube of aluminum that is 3.0 cm on each edge? The density of aluminum is  $2.7 \text{ g/cm}^3$ .