ANSWERS

SPH3U0 **Rearranging Equations Practice** LASS2011

1. Find the density of a metal block with a mass of 664.3 g and a volume of 8.7 cm^3 .

(Density = $\frac{mass}{volume}$)

$D = \frac{664.3\ g}{8.7\ cm^3} = 76\ g/cm^3$

2. Find the average speed of a baseball which travels 16.0 m in 1.4375 seconds.

(Average speed = $\frac{distance\ travelled}{time\ taken}$)

$V = \frac{16.0\ m}{1.4375\ s} = 11.1\ m/s$

3. Analyze the questions below to determine **the units** that would result from each of the following calculations.

a) 2 cm/s x 15 s — cm

b) 8 m ÷ 6s — m/s

c) 25 m/s^2 x 2s — m/s

d) 5 m/s ÷0.2 s — m

e) 2.5 kg ÷ 1.9 kg/m^3 — m^3

f) 7 $kg \cdot m/s^2$ x 3.2 m — kgm^2/s^2

4. Rearrange each formula to solve for the indicated quantity.

a) $E = VIT$; Solve for V

$V = \frac{E}{IT}$

b) $p = \frac{F}{A}$; Solve for A

$A = \frac{F}{p}$