

# Chapter One — Problems: 4, 6, 17, 19

Michael Brodskiy

Professor: Mr. Morgan

August 18, 2020

4. Classify the following as solution or heterogenous mixture:

- (a) Iron Ore — Heterogenous mixture
- (b) Chicken Noodle Soup — Heterogenous mixture
- (c) Tears — Solution

6. How would you separate ... into its components

- (a) A mixture of the volatile gases propane, butane, and isopropane?

Chromatography

- (b) A solution of rubbing alcohol made up of isopropyl alcohol and water?

Distillation

7. How many significant figures in the following:

- (a)  $0.890 [cm]$  — 3 Significant Figures
- (b)  $210 [C]$  — 2 Significant Figures
- (c)  $2.189 \cdot 10^6 [nm]$  — 4 Significant Figures
- (d)  $2.54 [cm] = 1 [in]$  — 1 Significant Figure
- (e)  $140.00 [g]$  — 5 Significant Figures

8. Round to the following number of significant figures:

- (a)  $7.4855 [g]$  (Three Figures)  $\Rightarrow 7.49 [g]$
- (b)  $298.693 [cm]$  (Five Figures)  $\Rightarrow 298.69 [cm]$
- (c)  $11.698 [lb]$  (One Figure)  $\Rightarrow 10 [lb]$
- (d)  $12.05 [oz]$  (Three Figures)  $\Rightarrow 12.1 [oz]$