

Without calculating each expression, determine the correct number of significant figures each answer should be reported to. Discuss the number of significant figures with your teammates.

a)  $6.42 \times 10^4 + 2.5 \times 10^3 =$

b)  $(2.00 \times 10^5)/(4.0 \times 10^3) =$

c)  $\frac{9.284 - 4.81}{12 \times 1.13} =$

Would your answer for part c above change if you rounded off after each step?

Convert 1.0 square inches to square centimeters.

How many milliliters are in a cubic meter? How many cubic meters are in a liter?

Test-like question: You are a chemist who is charged with running a machine that puts a 20.00  $\mu\text{m}$  thick coating on note cards that are 3 x 5 inches. In order to put the coating on 500 of these cards, what is the minimum volume of coating you need (in mL)?

Another: Which of the following is a homogeneous mixture?

- (a) a wedding ring
- (b) sweat
- (c) Nile River water
- (d) human blood
- (e) compressed air in a scuba tank

