

This quiz is take-home and open book, and it is intended that all members of the group contribute to completing it. It is a violation of the Academic Honor Code to sign a quiz that you did not work on. **The quiz is due at the beginning of class on Thursday, September 7.**

List names in alphabetical order, and give social security numbers! Put names on all pages, and staple pages together

Points

- (4) 1. Write each of the following numbers in exponential notation, and give the number of significant figures in the number:

Number	Exponential Notation	Significant Figures
546.21		
0.0005050		
20.02		
3105.0		

- (4) 2. Carry out the following calculations, giving the answer in exponential notation and to the correct number of significant figures:

(a) 25.29×0.0016

(b) $\frac{203.27 \times 10^{-2} \times 0.51}{1456}$

(c) $3.12 + 0.04567$

(d) $9.2567 - 9.2531$

- (2) 3. The density of Hg is 13.6 g/mL. What does Hg stand for? What volume would 123.6 g of Hg occupy?

List names in alphabetical order. **Be sure to staple pages together!**

(3) 4. Carry out the following unit conversions:

4.26 km to cm

55 L to mL

35 °C to K

(2) 5. 15.0 g of mercury oxide decomposes upon heating into 13.9 g of mercury and oxygen.

(a) How many grams of oxygen are produced in this reaction?

(b) How much mercury oxide would be required to produce 14 g of oxygen?