

Answer the following. (1 point each)

1. Explain "counting by weighing" using an everyday (not chemistry) example.
2. If I have an item that weighs 5.80 grams and I need 5880 of these items how would you produce the required amount without counting each item.
3. Avogadro's number is equal to what number?
4. Avogadro's number is represented by what collective unit?
5. Explain why counting by weighing is necessary in Chemistry.

Solve the following problems. Be sure to include UNITS on your answers!! (3 points each)

6. How many amu would 2.97×10^{13} atoms of hydrogen weigh?
7. How many atoms of barium would I have if I had 823.9 amu of barium?
8. How many grams of argon do I have if I have 23.2 moles of argon?

9. How many moles of zinc do I have if I have 108.9 grams of zinc?
10. How many atoms of silver do I have if I have 4.92 moles of silver?
11. How many atoms of sulfur do I have if I have 30.5 grams of sulfur?
12. What is the molar mass of calcium oxide?
13. What is the molar mass of barium nitrate?
14. How many grams of barium chloride do I have if I have 0.572 moles of barium chloride?
15. How many moles of nitrogen dioxide do I have if I have 89.8 grams of nitrogen dioxide?

Find the percent composition of all of the elements in the following compounds (3 pts per line)

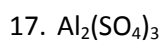


N: _____

H: _____

P: _____

O: _____



Al: _____

S: _____

O: _____

NOTE: PERCENT COMPOSITION MAY OR MAY NOT BE ON THE QUIZ... I WILL LET YOU KNOW.