

AP Chem

Quiz: Basics (Ch 1 & 2)

Version A (24 pts)

Complete the following problems and record the answer with the correct number of Sig Figs. (1 pt correct answer, 1 pt correct sig figs)

1. (2 pts) $5000.1 + 400.53 + 98.640 =$

2. (2 pts) $8.932 \times 10^5 \times 0.00040 / 12.5 =$

Perform the following conversions. (1 pt correct answer, 1 pt correct sig figs)

3. (2 pts) 155 nm to cm

4. (2 pts) 1.215 g/mL to kg/m^3

5. (2 pts) 178.0 K to $^{\circ}\text{C}$

Complete the table below using the clues provided.

6. (2 pts) A particular “particle” (atom or ion) of phosphorus has 17 neutrons and 18 electrons. Write the symbol for this atom, including element symbol, atomic number, charge, and mass number in the appropriate position. (0.5 pt each for element symbol, atomic number, charge, and mass number in correct position)

Provide the name or chemical formula (as needed) for the following compounds. (1 pt each: all or nothing!)

7. Na_2HPO_4 _____

8. Fe_2O_3 _____

9. $(\text{NH}_4)_2\text{SO}_4$ _____

10. CrF_3 _____

11. $\text{Cd}(\text{OH})_2 \cdot (\text{H}_2\text{O})_6$ _____

12. CsClO_3 _____

13. Hydroiodic acid _____

14. Potassium perchlorate _____

15. Lithium nitrite _____

16. Hypobromous acid _____

17. Aluminum carbonate _____

18. Mercury (I) cyanide _____

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Version B (24 pts)

Complete the following problems and record the answer with the correct number of Sig Figs. (1 pt correct answer, 1 pt correct sig figs)

1. (2 pts) $2.0 \times 10^5 / 4006 * 91.23 =$

2. (2 pts) $0.091 + 10.89 + 0.1926 =$

Perform the following conversions. (1 pt correct answer, 1 pt correct sig figs)

3. (2 pts) 32.9 μg to kg

4. (2 pts) 9.090 g/m^3 to mg/L

5. (2 pts) 32.1 $^{\circ}\text{C}$ to K

Complete the table below using the clues provided.

6. (2 pts) A particular “particle” (atom or ion) of silicon has 13 neutrons and 10 electrons. Write the symbol for this atom, including element symbol, atomic number, charge, and mass number in the appropriate position. (0.5 pt each for element symbol, atomic number, charge, and mass number in correct position)

Provide the name or chemical formula (as needed) for the following compounds. (1 pt each: all or nothing!)

7. Iodic acid _____

8. Sodium sulfite _____

9. Magnesium nitride _____

10. Calcium nitrate _____

11. Tin (IV) peroxide _____

12. Sulfurous acid _____

13. $(\text{NH}_4)_3\text{P}$ _____

14. HgBr_2 _____

15. BaHCO_3 _____

16. $\text{Pb}(\text{OH})_2 \cdot (\text{H}_2\text{O})_5$ _____

17. CuO _____

18. AgMnO_4 _____