

CHM 130: Chapter 6 Blackboard Homework Questions

1. Give the **element symbol** for the **halogen** in the **third period**.
2. Give the **element symbol** for the **noble gas** in the **second period**.
3. Give the **element symbol** for the **alkali metal** in the **fourth period**.
4. Give the **element symbol** for the **alkaline earth metal** in the **third period**.
5. Give the **element symbol** for the **halogen** with the **largest atomic radius**.
6. Give the **element symbol** for the **noble gas** with the **greatest ionization energy**.
7. Give the **element symbol** for the **alkali metal** with the **largest atomic radius**.
8. Give the **element symbol** for the **Group IVA element** with the **greatest metallic character**.
9. Using the Periodic Table, determine the number of valence electrons for **magnesium**.
10. Using the Periodic Table, determine the number of valence electrons for **chlorine**.
11. Using the Periodic Table, determine the number of valence electrons for **silicon**.
12. Indicate the number of electrons gained or lost when a neutral **strontium atom** becomes a **strontium ion**.
13. Indicate the number of electrons gained or lost when a neutral **phosphorus atom** becomes a **phosphide ion**.
14. Use the Periodic Table to determine the correct formula for the **ion formed by Ca**.
15. Use the Periodic Table to determine the correct formula for the **ion formed by Br**.
16. Use the Periodic Table to determine the correct formula for the **ion formed by nitrogen**.
17. Use the Periodic Table to determine the correct formula for the **ion formed by K**.
18. Use the Periodic Table to determine the correct formula for the **ion formed by Al**.
19. Use the Periodic Table to determine the correct formula for the **ion formed by sulfur**.
20. Check all of the ions below that are **isoelectronic** with **argon**.
a. O^{2-} b. Mg^{2+} c. Al^{3+} d. Ti^{4+} e. K^+ f. Ca^{2+} g. P^{3-} h. Cl^- i. N^{3-} j. F^-
21. Check all of the ions below that are **isoelectronic** with **neon**.
a. O^{2-} b. Mg^{2+} c. Al^{3+} d. Ti^{4+} e. K^+ f. Ca^{2+} g. P^{3-} h. Cl^- i. N^{3-} j. F^-
22. Give the **electron configuration for silicon** using core notation (Noble gas abbreviation).
23. Give the **electron configuration for sulfur** using core notation (Noble gas abbreviation).
24. Give the **electron configuration for Br^-** using core notation (Noble gas abbreviation).
25. Give the **electron configuration for N^{3-}** using core notation (Noble gas abbreviation).
26. Give the **electron configuration for Ca^{2+}** using core notation (Noble gas abbreviation).
27. Give the **electron configuration for Na^+** using core notation (Noble gas abbreviation).