# Chapter Two – Problems: 14, 50, 52

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14. How many neutrons, protons, and electrons does each have, and what element does each represent?

    (a) ${}^{75}_{33}A \Rightarrow 33p^+, 33e^-, 42n$ This element is arsenic

    (b) ${}^{51}_{23}L \Rightarrow 23p^+, 23e^-, 28n$ This element is vanadium

    (c) ${}^{131}_{54}Z \Rightarrow 54p^+, 54e^-, 77n$ This element is xenon

50. Give the number of protons and electrons in the following:

    (a) $S_8 \Rightarrow 128p^+, 128e^-$

    (b) $SO_4^{2-} \Rightarrow 48p^+, 50e^-$

    (c) $H_2S \Rightarrow 18p^+, 18e^-$

    (d) $S^{2-} \Rightarrow 16p^+, 18e^-$

52. Complete the table:

| Nuclear Symbol | Metal, Nonmetal Metalloid | Group | Period | Number of Neutrons |
|---|---|---|---|---|
| Al-27 | Metal | 13 | 3 | 14 |
| Te-128 | Metalloid | 16 | 5 | 76 |
| Xe-134 | Nonmetal | 18 | 5 | 80 |
| C-12 | Nonmetal | 14 | 2 | 8 |