

10. Name the element which has the following numbers of particles:

- a. 26 electrons, 29 neutrons, 26 protons Iron
- b. 53 protons, 74 neutrons Iodine
- c. 2 electrons (neutral atoms) Helium
- d. 20 protons Calcium
- e. 86 electrons, 125 neutrons, 82 protons Lead
- f. 0 neutrons Hydrogen

11. If you know ONLY the following information can you ALWAYS determine what the element is? (Yes/No)

- a. Number of protons yes
- b. Number of neutrons no
- c. Number of electrons in a neutral atom yes
- d. Number of electrons no

12. Fill in the missing items in the table below.

| NAME | SYMBOL | Atomic Z num | Atomic A mass | # PROTONS | # ELECTRONS | # NEUTRONS | ISOTOPIC SYMBOL |
|---------------|--------|--------------------|---------------------|-----------|----------------|---------------|--------------------|
| a. Sodium | Na | 11 | 23 | 11 | 11 | 12 | SKIP |
| b. Chlorine | Cl | 17 | 35 | 17 | 18 | 18 | |
| c. Potassium | K | 19 | 39 | 19 | 19 | 20 | |
| d. Phosphorus | P | 15 | 31 | 15 | 15 | 16 | |
| e. Iron | Fe | 26 | 56 | 26 | 24 | 30 | |
| f. Iodine | I | 53 | 127 | 53 | 53 | 74 | |
| g. Silver | Ag | 47 | 108 | 47 | 47 | 61 | |
| h. Krypton | Kr | 36 | 85 | 36 | 36 | 49 | |
| i. Tungsten | W | 74 | 184 | 74 | 74 | 110 | |
| j. Copper | Cu | 29 | 64 | 29 | 29 | 35 | |
| k. Indium | In | 49 | 115 | 49 | 49 | 66 | |
| l. Gold | Au | 79 | 197 | 79 | 78 | 118 | |
| m. Sulfer | S | 16 | 32 | 16 | 18 | 16 | |