# Isotopes

-- atoms with the same number of protons (atomic number) but different number of neutrons

- atoms of the SAME element
- diff mass #

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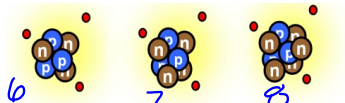
# Writing Isotopes




1. element name-mass number
   lithium-6 lithium-7 lithium-8
2. mass number / atomic number X-chem Symbol

$^{6}_{3}Li$ $^{7}_{3}Li$ $^{8}_{3}Li$

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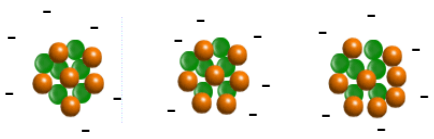
# Writing Isotopes



Write both isotope notations for each of the isotopes above.

Carbon-12 $^{12}_{6}C$ Carbon-13 $^{13}_{6}C$ Carbon-14 $^{14}_{6}C$

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# Homework Check

mass # = $p^+ + n^0$

| Protons | Neutrons | Electrons | Mass Number | Isotope Notation #1 | Isotope Notation #2 |
|---|---|---|---|---|---|
| 1 | 0 | 1 | 1 | $^{1}_{1}H$ | hydrogen-1 |
| 18 | 20 | 18 | 38 | $^{38}_{18}Ar$ | argon-38 |
| 92 | 118 | 92 | 210 | $^{210}_{92}U$ | uranium-210 |
| 80 | 100 | 80 | 180 | $^{180}_{80}Hg$ | Mercury-180 |
| 40 | 50 | 40 | 90 | $^{90}_{40}Zr$ | Zirconium-90 |
| 77 | 91 | 77 | 168 | $^{168}_{77}Ir$ | Iridium-168 |

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