

Isotopes: same # p^+ , different # n^0 ($p^+ = e^-$)
 [n^0 stabilize atom]

$\begin{matrix} 35 \leftarrow \text{Mass \#} \\ 17 \leftarrow \text{Atomic \#} \\ \text{Chlorine-35} \end{matrix}$	$\text{Mass \#} = p^+ + n^0$	$\begin{matrix} 37 \leftarrow \text{Mass \#} \\ 17 \leftarrow \text{Atomic \#} \\ \text{Chlorine-37} \end{matrix}$
$p^+: 17 \quad e^-: 17$	change	$p^+: 17 \quad e^-: 17$
$n^0 = \text{Mass \#} - \text{Atomic \#} = 35 - 17 = 18$		$n^0 = 37 - 17 = 20$



Isotope (atomic) mass

Mass of atom in atomic mass unit (amu)

1 amu = Mass of 1 p^+ or 1 n^0

$\begin{matrix} 35 \leftarrow \text{Mass \#} \\ 17 \leftarrow \text{Atomic \#} \\ \text{Chlorine-35} \end{matrix}$	$\frac{\text{Atomic Mass}}{\text{Mass \# in amu (Mass of } p^+ + n^0 \text{)}}$
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$\begin{matrix} 35 \\ 17 \\ \text{Cl} \end{matrix}$	$\text{Mass \#} = 35$ <p>(count)</p> $\text{Atomic Mass} = 35 \text{ amu}$ <p>(measurement)</p>
$\begin{matrix} 37 \\ 17 \\ \text{Cl} \end{matrix}$	$\text{Mass \#} 37$ $\text{Atomic Mass} = 37 \text{ amu}$

