Binding energy of helion $B = \left(\Sigma m_i - M\right) c^2$

Method 1 use atomic mass units of nuclei from CoDATA

$$
\begin{array}{rlrl}
 & 2m_p & = 2\times & 1.007\,276\ u \\
+ & m_n & + & 1.008\,664\ u \\
- & m_h & - & 3.014\,932\ u \\
\hline
 & & & 0.008\,285\ u = 7.72\ \text{MeV}
\end{array}
$$

Method 2 use energy equivalent of nuclei from CoDATA

$$
\begin{array}{rlrl}
 & 2E_p & = 2\times & 938.272\ \text{MeV} \\
+ & E_n & + & 939.565\ \text{MeV} \\
- & E_h & - & 2808.391\ \text{MeV} \\
\hline
 & & & 7.718\ \text{MeV}
\end{array}
$$

Method 3 use atomic masses (not nuclear masses)

$$B = \left(\underset{+2m_e}{2m_p} + m_n - \underset{-2m_e}{m_h}\right) c^2$$

$$= \left(2\,m(^1H) + m_n - m(^3He)\right) c^2$$ atomic masses!

method 4 use atomic mass excesses $[\Delta = M_{Z,N} - A \times (1u)]$

show $B = \left[2\Delta(^1H) + \Delta(n) - \Delta(^3He)\right] c^2$

can use Nubase ← atomic mass excesses