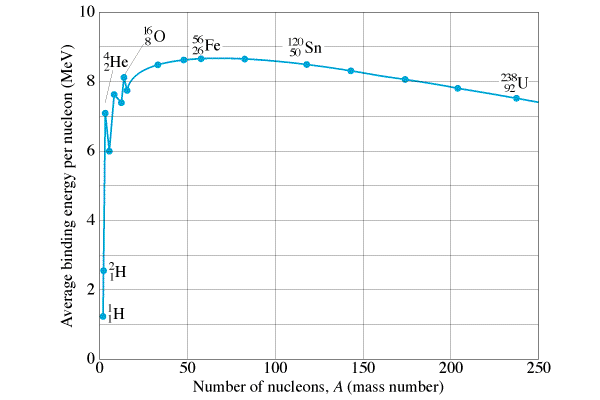
**Noteguide for The Curve of Binding Energy- Videos 30O Name**

The curve of binding energy:

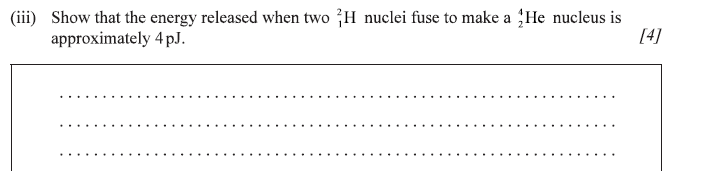
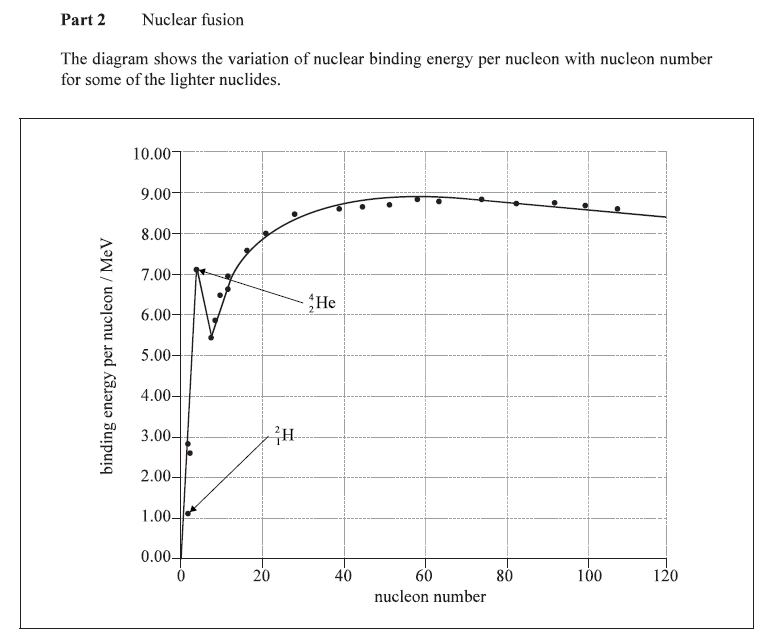
Define:

Binding energy per nucleon -

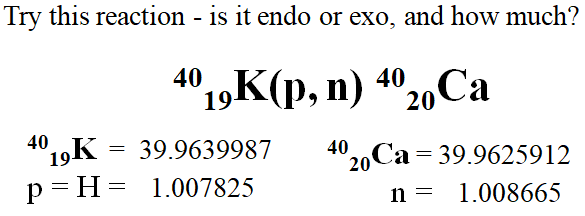
What’s more and less stable –

Mark where fusion (joining) and fission (splitting) can release energy. Where are the most stable nuclei?

|  |  |
| --- | --- |
| Fusion powers the sun:  Energy comes primarily from the Proton-Proton cycle:  1H + 1H = 2H + e+ + ν  1H + 2H = 3He + γ  3He + 3He = 4He + 1H + 1H | Helium can also fuse:  4He + 4He = 8Be + γ  4He + 8Be = 12C + γ  Carbon can fuse as well:  12C + 12C = 24Mg + γ  16O + 16O = 28Si + 4He |

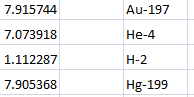


Finding Q-Value from Binding Energy per nucleon: (We did these before using mass)



K-40 has a BE of 8.538080 MeV per nucleon

Ca-40 has a BE of 8.551299 MeV per nucleon (Q = +0.529 MeV (Exo))

 (-12.30 MeV)