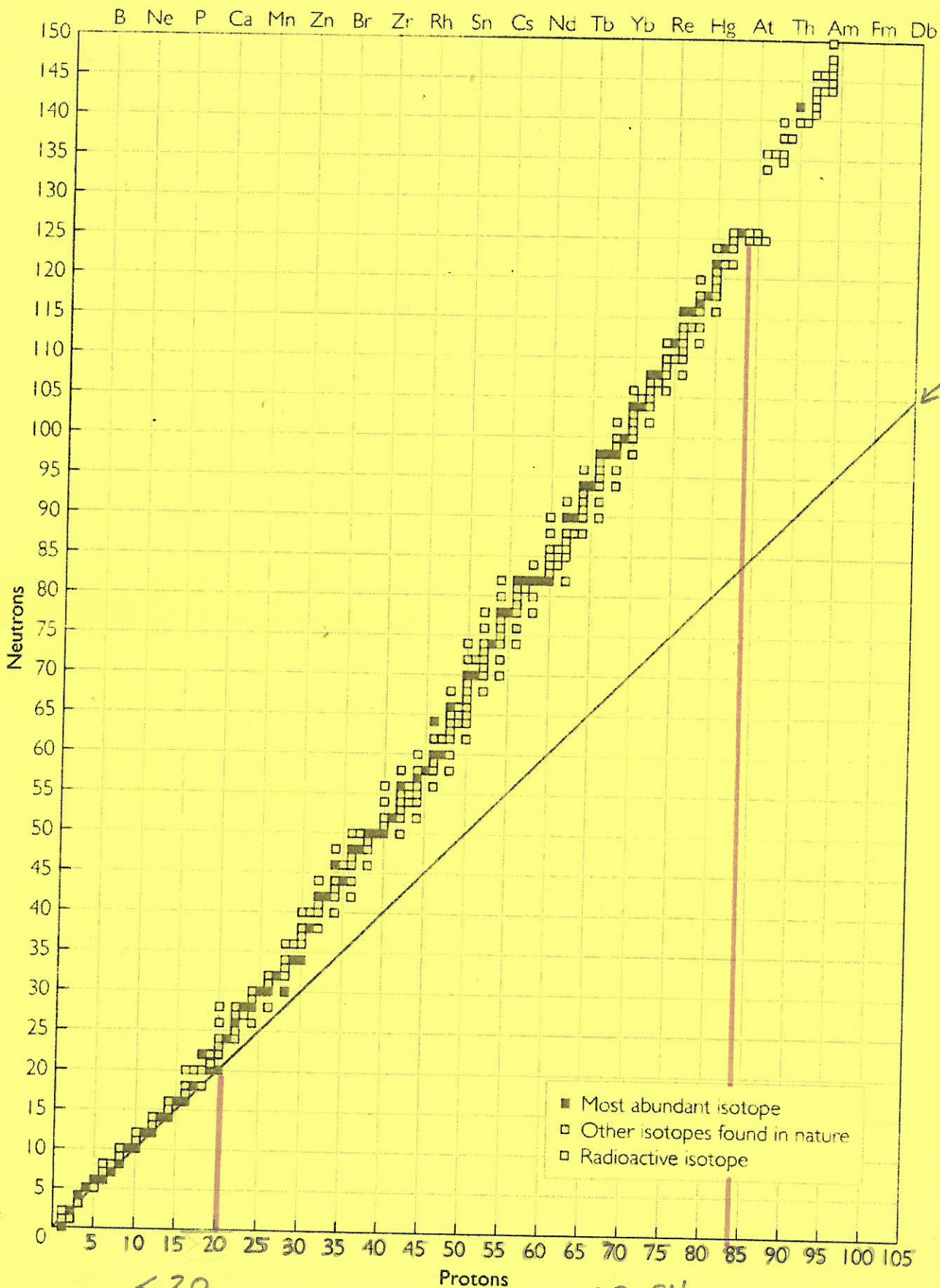


Isotopes of Elements

Isotopes of the Elements



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

< 20
 $\#p^+ \approx \#n^0$
 \therefore stable

20-84
 require more n^0
 for stability

(L14) Stable and Radioactive Isotopes

TODAY'S
DATE

E.Q.: What types of isotopes do the various elements have?

naturally occurring - when an atom or element can be found somewhere on Earth
- 92 naturally occurring elements

- rest elements have existed only as a result of human activity; these elements are called transuranium elements

radioactive isotopes any isotope that has an unstable nucleus and decays over time (e.g., technetium, Tc; promethium, Pm; and every element from polonium, Po, and beyond have radioactive isotopes)

the nucleus of an unstable isotope will decay & emit radioactive particles