

WS 5.1 Nuclear Particles & Reactions

1. What causes radioactivity? _____

Any element can have radioactive _____. There are no stable isotopes beyond element # _____.

2. Types of nuclear reactions: Complete this chart from notes in class...

Natural Decay: parent isotope spontaneously emits a particle...

	particle name	symbol
(α)	alpha	
(β)	beta	
	positron	
	neutron	
	proton	
	deuteron	
	gamma	γ

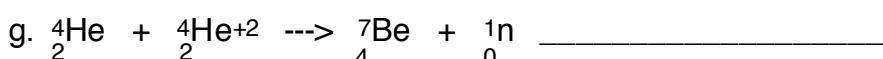
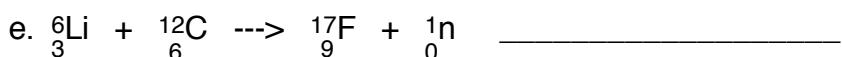
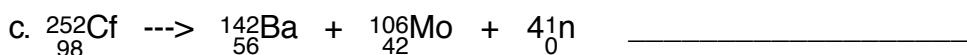
Induced: parent isotope is hit by a particle...

Electron Capture: parent isotope absorbs its own electron...

Fission: LARGE parent isotope splits into smaller daughter isotopes...

Fusion: two SMALL parents isotopes fuse into a larger parent isotope...

3. Label the following nuclear reactions as either fusion, fission, induced, natural decay, or electron capture:



Answer Bank:

fusion (1)

fission (2)

induced (3)

natural decay (2)

electron capture (2)