

Name _____ Period _____

CP Chemistry of the Earth

Assignment 1S – Unit 1 Review

30 Points

Answer the following questions based on the in class notes

Isotope A - X		Atomic #	Mass #	Protons (p ⁺)	Electrons (e ⁻)	Neutrons (n ^o)	Atomic Mass (amu)
51	V						
23							
Zinc-65							
		74	184				
Tin - _____				50		69	

Complete the following Chart to find the average atomic mass

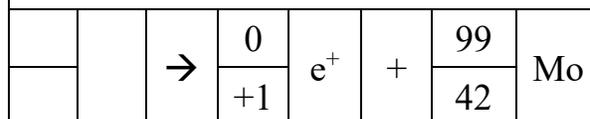
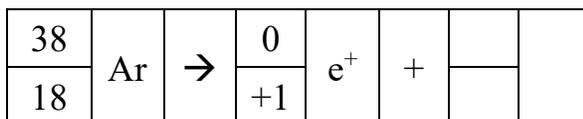
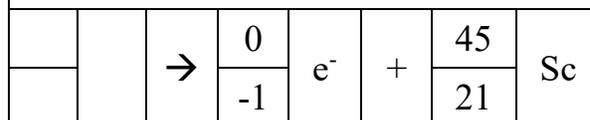
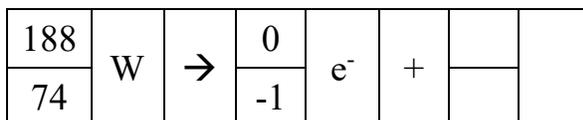
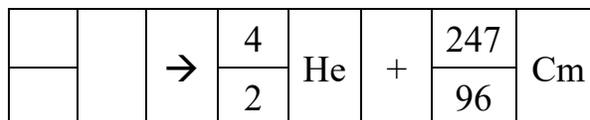
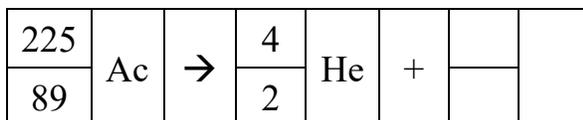
Cobalt has the following isotopes

Isotope	Atomic Mass (amu)	Fractional Abundance
Co-57		0.052
Co-58		0.182
Co-59		0.720
Co-61		0.046

Calculate the Average Atomic Mass of Co

Isotope	Atomic Mass (amu)	Fractional Abundance	Ratio (amu)
Co-57			
Co-58			
Co-59			
Co-61			

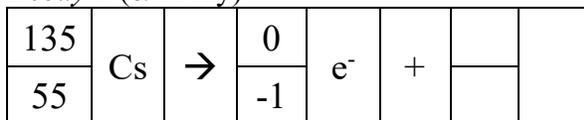
Complete the following nuclear decay equations



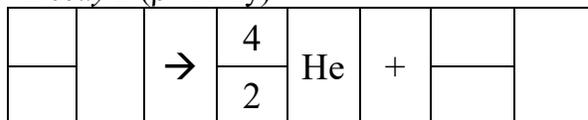
Complete the following nuclear decay chain

Cesium-135 Decay Chain

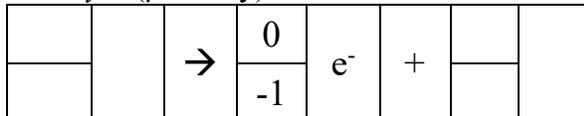
Decay 1 (α decay)



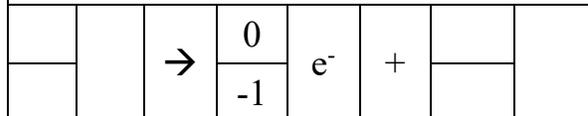
Decay 2 (β - decay)



Decay 3 (β - decay)



Decay 4 (α decay)



Complete the following charts based on the half-life of nuclear particles

Isotope	Starting Particles (N^o)	Number HL passed (n)	Remaining Particles (N_t)	Number HL passed (n)	Remaining Particles (N_t)
¹⁰ Be	100000	4		8	

Isotope	Starting Particles (N^o)	HL Time	Total Time	# HL Passed	Remaining Particles (N_t)
³³ P	100000	15.6days	93.6days		

Complete the section below with additional notes from the in class presentation for the extra credit bonus points on the Unit 1 Test (Cheat Sheet)