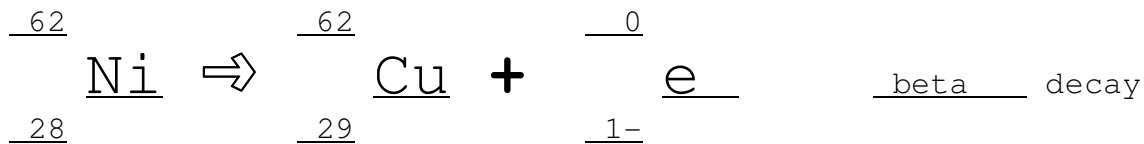
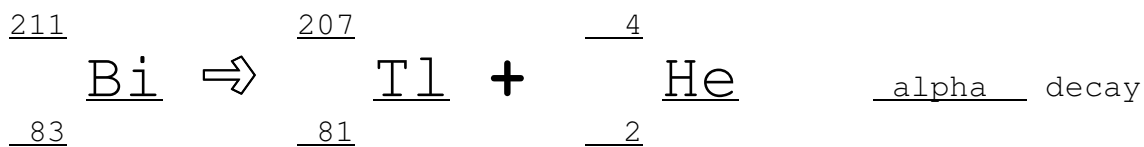
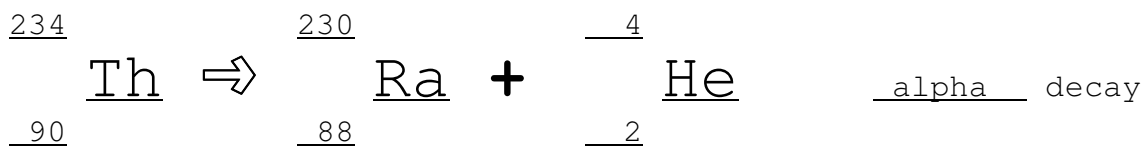
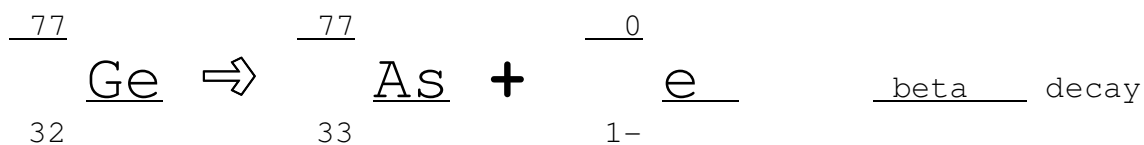
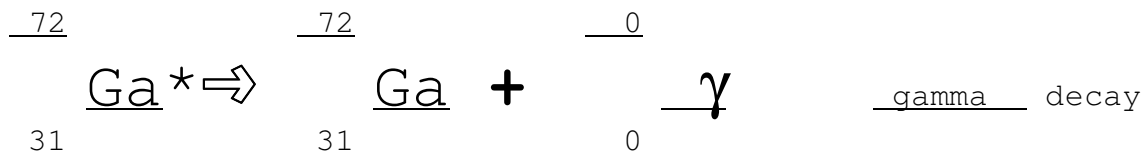


Name: \_\_\_\_\_

**Radioactive Decay and Average Isotopic Mass Quiz - SCH 3U**

Complete each decay process:



Neodymium found on earth is composed of seven different isotopes. They are Nd - 142, Nd - 143, Nd - 144, Nd - 145, Nd - 146, Nd - 148 and Nd - 150. These isotopes have the masses of 141.907731u, 142.909823u, 143.910096u, 144.912582u, 145.913126u, 147.916901u and 149.920900u respectively. Their percent abundance is 27.13 %, 12.18 %, 23.80 %, 8.30 %, 17.19 %, 5.76 %, 5.64 %. Use this information to determine the average atomic mass of Neodymium. Please use the format shown in class.

Nd - 142	141.907731 u	x	0.2713	=	38.49956742 u
Nd - 143	142.909823 u	x	0.1218	=	17.40641644 u
Nd - 144	143.910096 u	x	0.2380	=	34.25060285 u
Nd - 145	144.912582 u	x	0.0830	=	12.02774431 u
Nd - 146	145.913126 u	x	0.1719	=	25.08246636 u
Nd - 148	147.916901 u	x	0.0576	=	8.52001350 u
Nd - 150	149.920900 u	x	0.0564	=	8.45553876 u
					<hr/>
					144.2423496 u