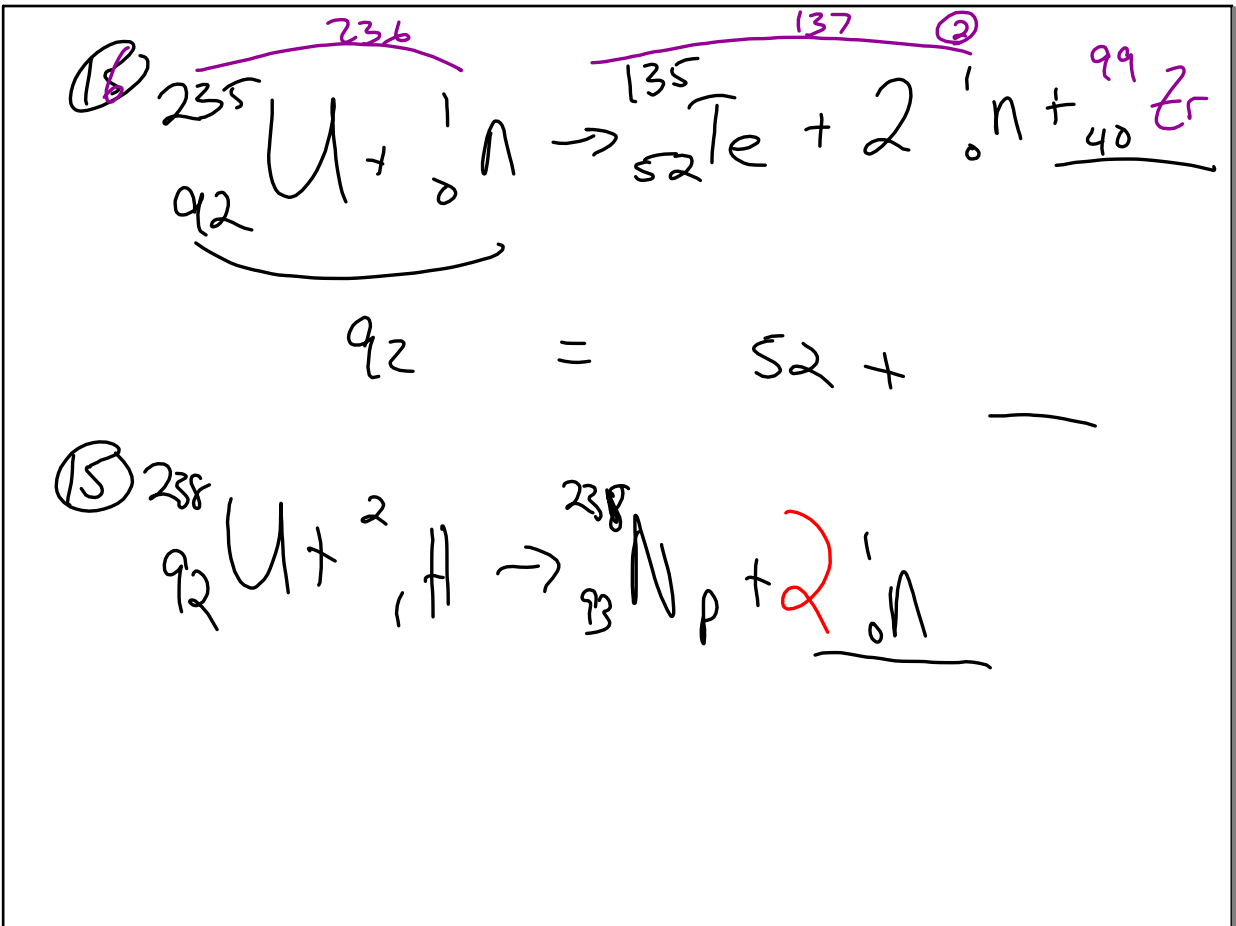
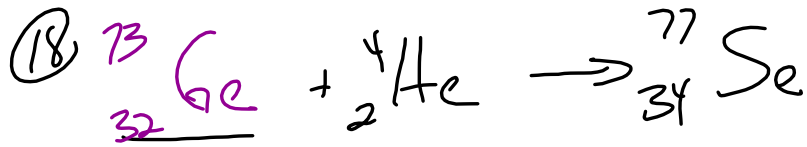


Apr 23-7:51 AM



Apr 23-8:28 AM



Apr 23-8:33 AM

(22)  ${}_{82}^{210}\text{Pb} \xrightarrow{t_{1/2} = 22.3\text{yr}} {}_{80}^{206}\text{Hg}$

$k = \frac{0.693}{22.3} = 0.0311\text{yr}^{-1}$

$A_0 = 7.5\text{g } {}^{210}\text{Pb}$   
 $t = 17.5\text{yr}$   
 $A_t = ? \text{ } {}^{210}\text{Pb}$   
 $\text{Hg} = ?$

---

$\ln A_t = -kt + \ln A_0$   
 $\ln A_t = -(0.0311)(17.5) + \ln 7.5 \iff \text{Pb}$   
 $A_t = 4.35$   
 $7.5 - 4.35 = 3.15 \text{ leftover Pb}$   
 $3.15 \text{ Pb} \left( \frac{206 \text{ Hg}}{210 \text{ Pb}} \right) = 3.09$

Apr 23-8:35 AM

$$E = 3.83 \times 10^{-12} \text{ J}$$

(23)

$$E = mc^2$$

$$3.83 \times 10^{-12} =$$

$$m (3 \times 10^8)^2$$

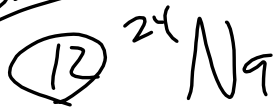
kg

$$4.26 \times 10^{-26} \text{ kg}$$

$$4.26 \times 10^{-26} \text{ g}$$

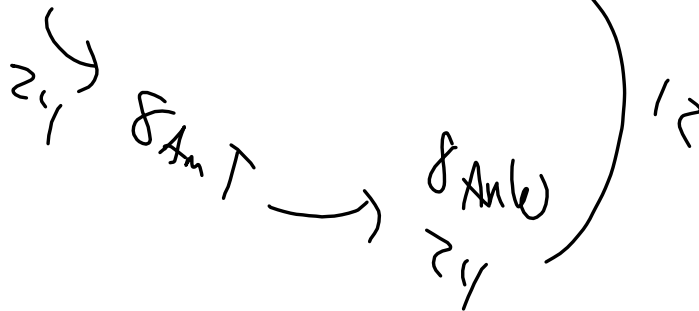
Apr 23-8:41 AM

PS2



$t_{1/2}$  15 hrs

8 AM M → 8 PM W



Apr 23-8:46 AM