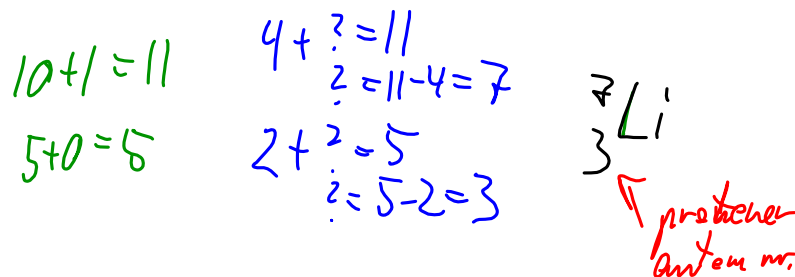
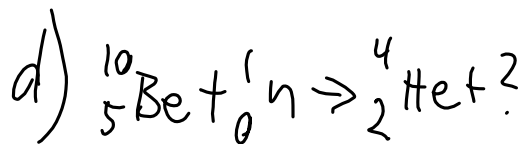
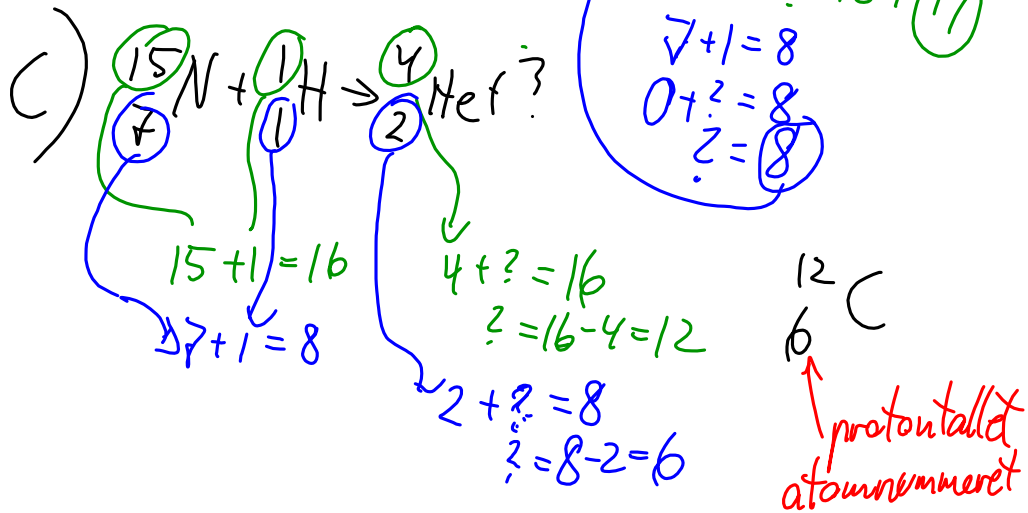
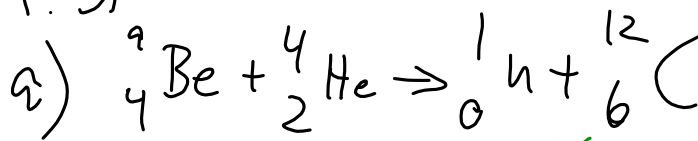


Bewaringsloven:

Nukleontallet er det samme før og etter en reaksjon

Ladningstallet — " —

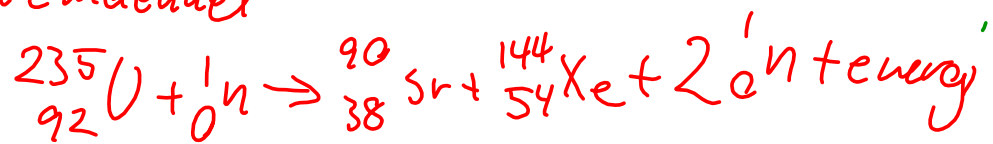
9.31



Halveringstid

Tiden det tar før halvparten av atomene er omdannet til andre atomer

Et atom omdannet



Eks: 1,0 mg Halveringstiden er 2 år
Etter 2 år er halvparten igjen

$$1,0 \text{ mg} \cdot \frac{1}{2} = 0,5 \text{ mg}$$

Etter 4 år:

$$1,0 \text{ mg} \left(\frac{1}{2}\right)^2 = 1,0 \text{ mg} \cdot \frac{1}{4} = 0,25 \text{ mg}$$

$$A = A_0 \cdot \left(\frac{1}{2}\right)^{\frac{t}{t_{1/2}}}$$

$$3 \text{ år} \quad 1,0 \text{ mg} \left(\frac{1}{2}\right)^{\frac{3 \text{ år}}{2 \text{ år}}} = 1,0 \text{ mg} \cdot \left(\frac{1}{2}\right)^{1,5} = 0,353 \text{ mg}$$

9.32

Halveringstid 12,33 år

Vi har 1,0 mg. Etter 50 år
har vi

$$1,0 [\text{mg}] \cdot \left(\frac{1}{2}\right)^{\frac{50}{12,33}} = 0,06 \text{ mg}$$

9.33

$$4,0 [\text{mg}] \cdot \left(\frac{1}{2}\right)^{\frac{109}{1600}} = 3,8 [\text{mg}]$$