

(7.12) For iron the mass attenuation coefficients are: at 0.5 MeV γ , 0.083; at 1.0 MeV, 0.059; at 1.5 MeV, 0.047 cm^2g^{-1} . Calculate the corresponding one-tenth values.

$$x(\mu) := \frac{\ln(10)}{\mu} \quad \text{Eqn. (7.22)}$$

$$\mu := 0.083 \cdot \text{cm}^2 \cdot \text{gm}^{-1} \quad x(\mu) = 27.742 \cdot \text{gm} \cdot \text{cm}^{-2} \quad \text{at 0.5 MeV}$$

$$\mu := 0.059 \cdot \text{cm}^2 \cdot \text{gm}^{-1} \quad x(\mu) = 39.027 \cdot \text{gm} \cdot \text{cm}^{-2} \quad \text{at 1.0 MeV}$$

$$\mu := 0.047 \cdot \text{cm}^2 \cdot \text{gm}^{-1} \quad x(\mu) = 48.991 \cdot \text{gm} \cdot \text{cm}^{-2} \quad \text{at 1.05 MeV}$$