

Given:

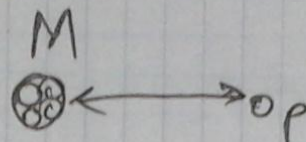
$$Z_M = 80(e) = 80 \cdot 1,6 \times 10^{-19} \text{ C}$$

$$e = 1,6 \times 10^{-19} \text{ C}$$

$$d = 2,4 \text{ nm}$$

Find:

Fe



Electrical charge p (proton)
= Electrical charge e (electron)

~~low~~

Coulomb's law

$$|F_e| = k_e \frac{|q_1| |q_2|}{r^2}$$

$$k_e = 8,98 \times 10^9 \text{ N} \cdot \text{m}^2 \cdot \text{C}^{-2}$$

$$q_1 = 80 \cdot 1,6 \times 10^{-19} \text{ C}$$

$$q_2 = 1,6 \times 10^{-19} \text{ C}$$

$$r = d = 2,4 \times 10^{-9} \text{ m}$$

$$|F_e| = 8,98 \times 10^9 \text{ N} \cdot \text{m}^2 \cdot \text{C}^{-2} \cdot \frac{80 \cdot 1,6 \times 10^{-19} \text{ C} \cdot 1,6 \times 10^{-19} \text{ C}}{(2,4 \times 10^{-9} \text{ m})^2} =$$

$$= 766,2 \times 10^{-20} \text{ N}$$