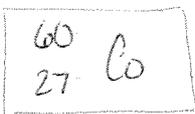


P #A

Ch 29 - Worksheet

a) $Z = \# \text{ of protons} = 27$
 $m = 59.93 \text{ u}$

From Appendix B:



b) $\# \text{ of neutrons} = A - Z$

$$= 60 - 27$$

$\# \text{ of neutrons} = 33$

c) $m = 59.93 \text{ u} \cdot \frac{1.66 \times 10^{-27} \text{ kg}}{1 \text{ u}} = 9.948 \times 10^{-26} \text{ kg (per atom)}$

By dimensional analysis:

$$\frac{2.34 \times 10^{-4} \text{ kg}}{9.948 \times 10^{-26} \text{ kg per atom}}$$

$= 2.35 \times 10^{21} \text{ atoms}$
