

Find the Elements and Solve the Mystery Phrase
Dr. Slotsky Chemistry I

Hint: Keeping the hours in the observatory

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1 2 3 4 5 6 7 8 9 10 11 12

Remember: Molar mass = atomic mass in grams = grams / moles
Moles = # atoms / 6.022×10^{23}

- 1) 10 moles of this element have a mass of 589.33 grams.
- 2) 61.948 grams of this element contain 1.2044×10^{24} atoms.
- 3) 5 moles of this element have a mass of 836.3 grams.
- 4) 0.5869 grams of this element contain 6.022×10^{21} atoms.
- 5) The mole is defined as 12 grams of the isotope of this element containing 6 protons and 6 neutrons.
- 6) One mole of this element has a mass of 238.03 grams.
- 7) One atom of this element has a mass of 5.3246×10^{-23} grams.
(HINT: one atom is $1/(6.022 \times 10^{23})$ moles)
- 8) 0.1 moles of this element has a mass of 3.2065 grams.
- 9) 2 moles of this element have a mass of 70.9 grams.
- 10) 15.999 grams of this element contain 6.022×10^{23} atoms.
- 11) 0.5 moles of this element have a mass of 6.0055 grams.
- 12) One atom of this element has a mass of 6.4925×10^{-23} grams.