

Average Atomic Mass Practice Problems - 2

3. Hydrogen is 99% ^1H , 0.8% ^2H , and 0.2% ^3H . Calculate its average atomic mass.

Calculate the % Abundance

This is already completed in the problem for you.

Convert % Abundance to Decimals

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Use the Equation to Calculate Average Atomic Mass

$$(\text{ } \times \text{ }) + (\text{ } \times \text{ }) + (\text{ } \times \text{ }) = \text{ }$$

4. Calculate the average atomic mass of magnesium using the following data for three magnesium isotopes.

Isotope mass (u) relative abundance

Mg-24 abundance is 0.7870

Mg-25 abundance is 0.1013

Mg-26 abundance is 0.1117

Calculate the % Abundance

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Convert % Abundance to Decimals

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Use the Equation to Calculate Average Atomic Mass

$$(\text{ } \times \text{ }) + (\text{ } \times \text{ }) + (\text{ } \times \text{ }) = \text{ }$$

5. Calculate the average atomic mass of chromium. (not in percents)

| <u>Isotope</u> | <u>Mass (amu)</u> | <u>Relative Abundance</u> |
|----------------|-------------------|---------------------------|
| Chromium – 50 | 49.946 | 0.043500 |
| Chromium – 52 | 51.941 | 0.83800 |
| Chromium – 53 | 52.941 | 0.095000 |
| Chromium – 54 | 53.939 | 0.023500 |

Calculate the % Abundance

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Convert % Abundance to Decimals

This is already completed in the problem for you.

Use the Equation to Calculate Average Atomic Mass

$$(\text{ } \times \text{ }) + (\text{ } \times \text{ }) + (\text{ } \times \text{ }) + (\text{ } \times \text{ }) = \text{ }$$