

# Practice:

Neon has three isotopes. Neon-20 has a mass of 19.992 amu and abundance of 90.48%, Neon-21 has a mass of 20.994 amu and an abundance of 0.27%, and Neon-22 has a mass of 21.991 amu and an abundance of 9.25%. What is the average atomic mass for neon? Show formula, set-up, and answer with units.

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# Practice:

Copper used in electric wires comes in two flavors (isotopes):  $^{63}\text{Cu}$  and  $^{65}\text{Cu}$ . The average atomic mass between these two isotopes is 63.546 amu. Calculate the percent abundance of each isotope.

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# Practice:

Give the number of protons, neutrons and electrons in the following:

| Isotope               | Protons | Neutrons | Electrons |
|-----------------------|---------|----------|-----------|
| uranium-235           |         |          |           |
| $^{59}_{28}\text{Ni}$ |         |          |           |

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# Practice:

How would you represent an isotope of carbon with seven neutrons?

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# Practice:

Write the complete equation for the alpha fusion of radon – 198.

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# Practice:

Arrange the following cations (positive ions) in order of increasing ionic radius:  $\text{Rb}^+$ ,  $\text{Be}^{2+}$ , and  $\text{Sr}^{2+}$ .

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# Practice:

Arrange the following elements in each set in order of decreasing ionization energy: Si, Cl, F

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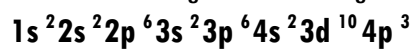
# Practice:

Arrange the following elements in order of decreasing atomic radius: O, N, F

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# Practice:

Determine which element has the following electron configuration:



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# Practice:

What is the noble-gas configuration for silicon?

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# Practice:

Draw the electron-dot structure for arsenic.

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# Practice:

Write the electron configuration for an ion of Fluorine ( $F^{-}$ ).

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# Practice:

Draw the orbital diagram for P.

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