

Practice:

$$p + n = \text{mass \#}$$

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

Isotope	Protons	Neutrons	Electrons	Mass number
uranium-235	92	143	92	235
⁵⁹₂₈Ni	28	59	21	1
	28	29	28	57
	28	31	28	59
	28	59	28	59

Handwritten notes:
 1. Next to uranium-235
 2. Next to ⁵⁹₂₈Ni
 59 (circled)
 28
 28, 29, 28, 57, 28, 31, 28, 59, 28, 59 are also present with various markings.

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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.

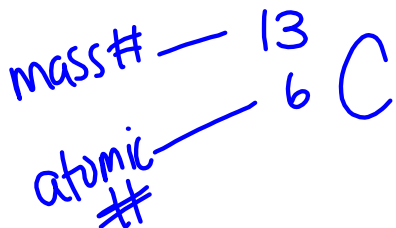
$$\begin{aligned} \text{avg. at. mass} &= (\text{mass} \times \text{abund})_1 + (\text{mass} \times \text{abund})_2 \\ &= (19.992 \times 0.9048) + (20.994 \times 0.0027) + (21.991 \times 0.0925) \\ &= 20.180 \text{ amu} \end{aligned}$$

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Practice:

How would you represent an isotope of carbon with seven neutrons?
(show 2 ways)

Carbon-13



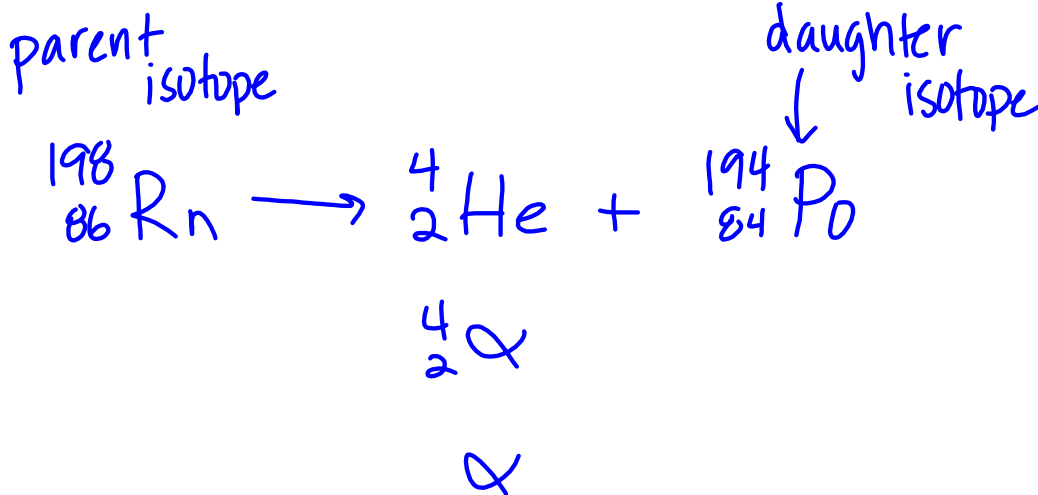
$$p + n = \text{mass \#}$$

$$6 + 7 = 13$$

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Practice:

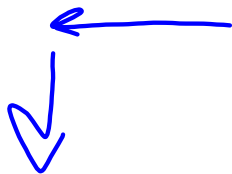
Write the complete equation for the alpha decay of radon — 198.



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Practice:

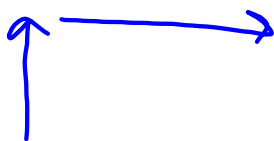
Arrange the following in order of increasing atomic radius: Rb, Be, and Sr.



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Practice:

Arrange the following elements in order of decreasing electronegativity: Si, Cl, F



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Practice:

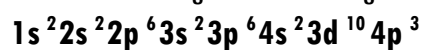
Arrange the following elements in order of decreasing atomic radius: O, N, F



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Practice:

Determine which element has the following electron configuration:

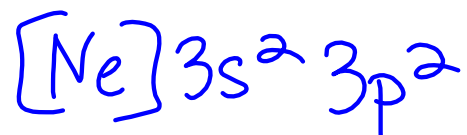


As

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Practice:

What is the noble-gas configuration for silicon?



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Practice:

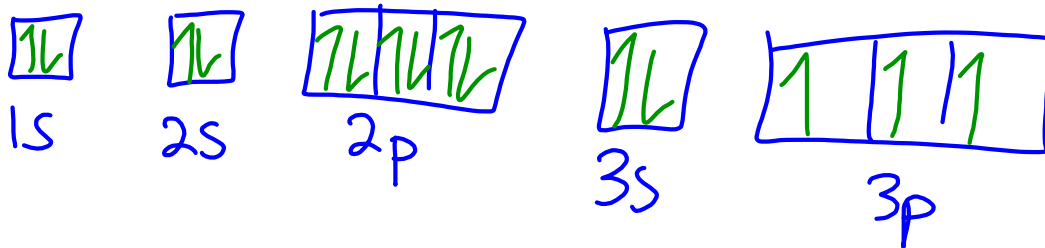
Draw the electron-dot structure for arsenic.



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Practice:

Draw the orbital diagram for P.



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