

Astronomy Ranking Task: Nuclear Physics

Exercise #2

Description: The following table has some information for five atoms on the periodic table, labeled V through Z. Note that some may be ions.

ranking letter	V	W	X	Y	Z
element symbol	Al				Na
proton number		16	36	17	
neutron number		16	50		12
electron number		18			10
mass number	27			35	
electrical charge	+3		0	-1	

A. Ranking instructions: Rank the numbers of protons in each atom.

Ranking Order: Least 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ Most

Carefully explain your reasoning for ranking this way:

B. Ranking instructions: Rank the numbers of neutrons in each atom.

Ranking Order: Least 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ Most

Carefully explain your reasoning for ranking this way:

C. Ranking instructions: Rank the numbers of electrons in each atom.

Ranking Order: Least 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ Most

Carefully explain your reasoning for ranking this way:

D. Ranking instructions: Rank the mass numbers of each atom.

Ranking Order: Least 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ Most

Carefully explain your reasoning for ranking this way:

E. Ranking instructions: Rank the values of the electrical charges on each atom.

Ranking Order: Most Negative 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ Most Positive

Or, all of the atoms have the same electrical charge. _____ (indicate with a check mark)

Or, there is not enough information to determine this. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:
