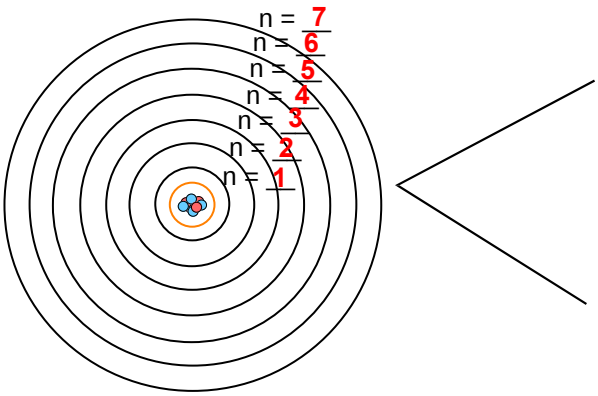
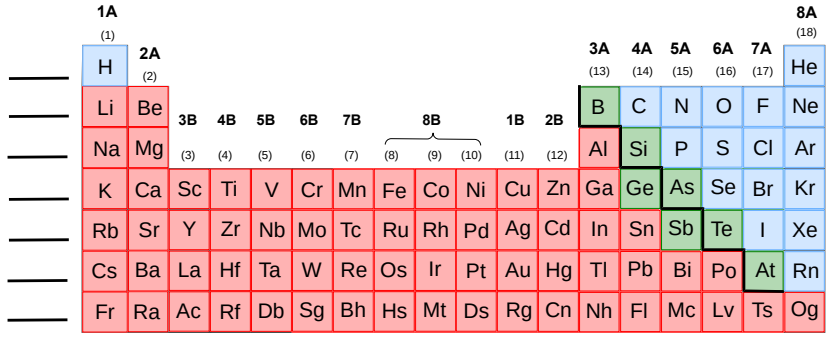
CONCEPT: ELECTRONIC STRUCTURE: SHELLS

- Recall, a shell (*n*) is a grouping of electrons surrounding the nucleus that ties into their _____ energy.
  - □ As the value for *n* increases then both the size and energy level of an atomic orbital will ____.
  - □ The energy levels (shell numbers) of an atom can be tied to the _____ or rows of the Periodic Table.



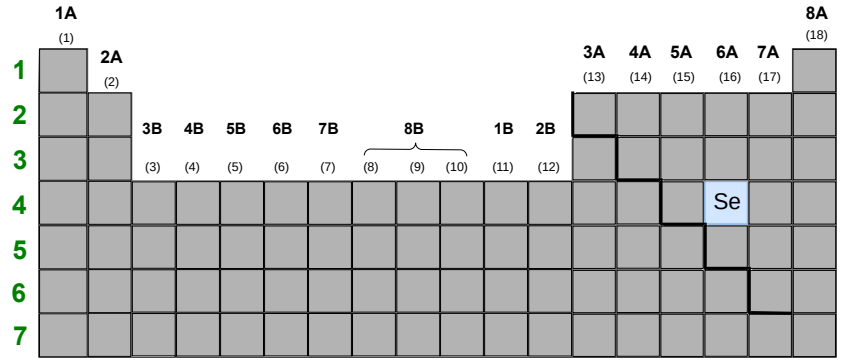


- □ **Limitation**: The *n* value must be an integer from _____ to _____.

EXAMPLE: Which of the following is a possible value for the shell of an atom?

a) n = –3 b) n = – 4 c) n = 0 d) n = 2 e) n = – 5

PRACTICE: Which of the following shell number values is a possible value for the element highlighted?



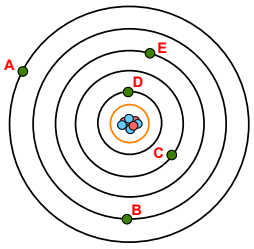
a) n = 10

b) n = 4

c) n = 6

d) n = 7

PRACTICE: Which electron possesses the lowest possible energy from the image provided?



a) A b) B c) C d) D e) E