CONCEPT: ELECTRONIC STRUCTURE: SUBSHELLS

● The shell of an atom can be further divided into subshells (sublevels), with each one assigned a variable letter.

Subshell Designations				
Shell Number (n)	1	2	3	4
Subshell				

EXAMPLE: What are the possible values for n and subshell letter for an electron found in the 3rd energy level and d sublevel?

a) n = 2, subshell = f   b) n = 3, subshell = d   c) n = 1, subshell = d   d) n = 3, subshell = p

---

PRACTICE: Provide the identity of an orbital that is in the fourth shell and has a value of for l that is 3.

a) 3f   b) 2p   c) 4p   d) 4f   e) 4d

PRACTICE: How many sublevels are contained in the third shell (n = 3) for a given atom?

a) 1   b) 2   c) 3   d) 4   e) 5