

OBJECTIVE WORKSHEET Quantum Theory

1. How did Niels Bohr revise Rutherford's revision of Dalton's atomic theory?
2. What does it mean when a scientist says, "the energies of electrons are quantized."
3. How many energy levels for electrons does the chapter discuss?
4. Who discovered the QUANTUM MECHANICAL MODEL?
5. What shape do the s and p orbitals have?
6. What does "n" stand for when we discuss atomic orbitals?
7. What is the maximum number of electrons allowed in when $n=4$?
8. What is "neon" lighting?
9. What is an electron configuration?
10. According to the Aufbau principle, which orbital (s,p,d,f) has the lowest energy?
11. How would you designate an atom with two electrons?
12. What is HUND'S RULE?
13. For the following elements, write their electron configuration:
 - A. Br
 - B. Sn
 - C. * Pt
 - D. Sr
14. Why was Robert Bunsen significant to science?
15. What is the diagonal rule?
16. Name the four parts of a wave and draw one.
17. Describe the wavelengths of a star emitting a red light and then a blue light.
18. How do we identify atoms of elements in space?
19. What is the formula for frequency? Label the variables.
20. What is the frequency of radiation whose wavelength is 6.00×10^{-6} cm?