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| Review (2 of 2 ) EHS Cλ3MIs+rγ Mr. Genest |  | Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 1. Which are *quantized*?
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| * 1. (yes/no )A click shifter on a ten speed bike
	2. (yes/no )Electron energy in hydrogen
	3. (yes/no )Electron energy in gold atoms
 | * 1. (yes/no )the mass of something made of atoms
	2. (yes/no )The venetian blinds in our classroom
	3. (yes/no )The volume on an iPod
 | * 1. (yes/no )The second hand on the clock in our classroom
	2. (yes/no )The rotation of a doorknob
	3. (yes/no )The altitude of the steps on a stairway
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| 1. Are these four shapes associated more with Niels Bohr or the modern theory of e- from Schrodinger et al?
2. Compared to each of these shapes, where is an e- located? (circle one or more choices)
	1. inside them
	2. on the surface of them
	3. outside them
3. Answer in a sentence. What does the number 90% have to do with these drawings?
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1. Complete the chart.

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| --- | --- | --- | --- | --- | --- | --- |
| p | n | e | symbol | atomic number | mass number | charge |
| 5 |  |  |  |  | 12 | 0 |
|  | 18 | 18 |  | 17 |  |  |
| 13 |  | 10 | $$$$ |  | 28 |  |
|  | 21 | 18 |  | 20 |  | +2 |
| 16 | 16 | 18 | $$$$ |  |  |  |



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| 1. Which scientist is most associated with this style of drawing an atom?
	1. Niels Bohr
	2. Erwin Schrodinger
2. Is the drawing of this chlorine atom showing **orbitals** or **orbits**? (circle one)
3. If these circles were the only places an electron could be, how many different wavelengths of light could this atom emit?
	1. Thirty five wavelengths
	2. Seventeen wavelengths
	3. Seven wavelengths
	4. Three wavelengths
 | 1. http://www.green-planet-solar-energy.com/images/chlorine-bohr.gif
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1. According to the electromagnetic spectrum you memorized, which has more energy? (circle one) green light or microwaves
2. For a neutral atom of Niobium (atomic # 41) [in the ground state],
	1. How many electrons should it have? \_\_\_\_\_\_\_\_\_\_

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| * 1. write the boxes and arrows electron diagram
 | * 1. write the shorthand abbreviation of the electron diagram
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| * 1. write a Bohr circle and nucleus diagram
 | * 1. write the shorthand for the Bohr diagram
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