



**Guided Notes: Ch.4**

**Name:** \_\_\_\_\_

**Last few points to fill in the gaps**

**Date:** \_\_\_\_\_

**Period:** \_\_\_\_\_

**QUANTUM NUMBERS**

☼ Used to describe properties of the \_\_\_\_\_ (like shape) and to describe the properties of \_\_\_\_\_

<b>Name of Quantum #</b>				
<b>Symbol</b>				
<b>What it represents</b>	Main Energy Level	Shape of the Orbital	Orientation (x, y, or z axis)	Which way e <sup>-</sup> is spinning

**HOW CAN I FIGURE OUT WHAT ORDER THE ORBITALS FILL IF I DON'T HAVE AN ORBITAL DIAGRAM WITH ME???**

☼ Draw the following diagram on your scratch paper:

## **NOBLE GAS CONFIGURATION OF NOBLE GASES**

☼ Write it like a normal noble gas configuration, and use the noble gas that is \_\_\_\_\_ than the one you are writing the configuration for.

*Examples:*

Neon:  $[\text{He}]2s^22p^6$

Argon:  $[\text{Ne}]3s^23p^6$

*Practice Problems:*

Krypton:

Xenon:

## **ATOMIC EMISSION SPECTRUM**

☼ Electrons go up to a \_\_\_\_\_ when you add energy to the atom.

☼ When they fall back down to the starting level they

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☼ Sometimes this can be seen as \_\_\_\_\_

☼ The color that you see depends on the

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