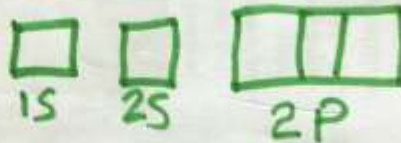
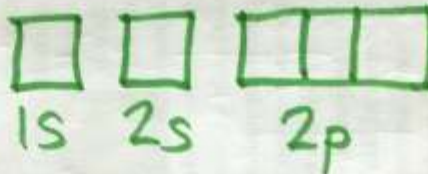
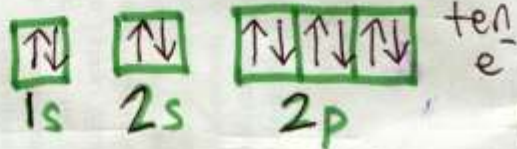
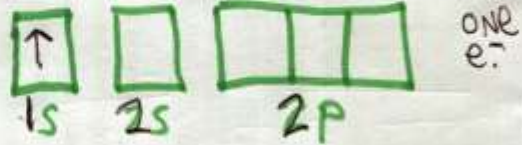


MAY 15, 2014

PURPOSE: WHAT IS THE MODERN WAY TO DRAW THE ELECTRONS OF AN ATOM?

HIGHER ENERGY →

#1 (copy)

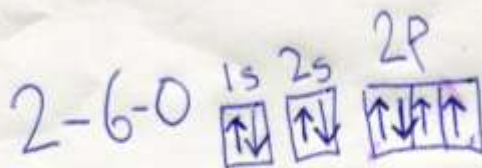
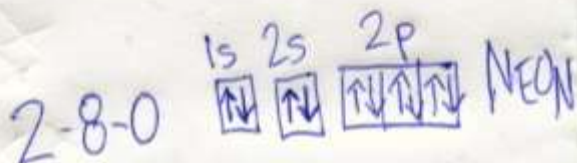
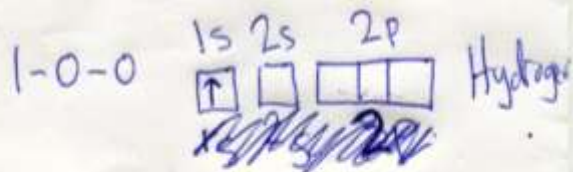


Department of Employee Trust Funds
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Homework: (page)

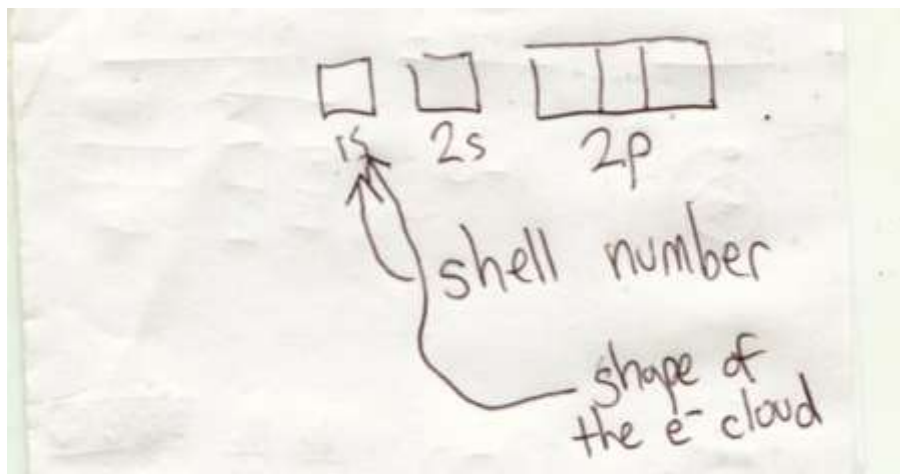
#1 THREE WAYS TO WRITE ELECTRON CONFIGURATION



Q: So what do the arrows in the boxes mean?

A: Each arrow is one electron.

The numbers and letters stand for shell and shape of the electron cloud



We took notes onto the following sheet as we watched on BBC “The Search For Reality”

<http://www.youtube.com/watch?v=eeJ4VyrroE>

These notes are testable. Know them.

1. Box With a Glove analogy put a check mark next to the FIVE boxes that are true	
<p><u>Classical Physics:</u></p> <p><input checked="" type="checkbox"/> "There's one glove in a box"</p> <p><input checked="" type="checkbox"/> "The glove inside the box is either left-handed or right handed"</p> <p><input checked="" type="checkbox"/> "If you open the box, you will see whether the glove is left or right."</p>	<p><u>Quantum Physics:</u></p> <p>1 <input checked="" type="checkbox"/> "There's one glove in a box"</p> <p>2 <input type="checkbox"/> "The glove inside the box is either left-handed or right handed"</p> <p>3 <input checked="" type="checkbox"/> "If you open the box, you will see whether the glove is left or right."</p>

2. **Gedankenexperiment**

What is the English translation of **Gedankenexperiment** ?

thought experiment

What was the name of Einstein's last **Gedankenexperiment** ?

E.P.R. PARADOX

What equipment do you need to do a **Gedankenexperiment** ?

NOTHING

In what situations do physicists do **Gedankenexperiment** ?

No PROPER EQUIPMENT EXISTS

Bohr's view of atomic particles can be described as

Nature's odd At the quantum Level

3. In the view of Copenhagen, the three boxes represent the Lab Equipment. Write a description under each. Label the 5 km distance between each box. Add a curly line to show the fiber optic tube that carried the light.



PHOTON
DETECTOR

A LASER THAT
Generates single
photons and
splits them.

PHOTON
Detector

4. What were the steps in Nicolas Gisin's 1997 experiment?

FIRST: Create one photon with a certain property.

BUT DON'T OBSERVE THE PROPERTY.

SECOND: Split the photon into a smaller pair of photons with OPPOSITE
PROPERTIES

Important, what you should observe at this point:

DON'T OBSERVE!

Send the photon pairs to two cities, 10 km apart by putting them in

FIBER
OPTIC
TELEPHONE
LINES

As soon as the photons arrive, do what?

Observe the property.

What is this evidence of?

Bohr was right