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| 1. **Democritus, Aristotle, john Dalton, jj Tomson, Rutherford, Bohr, Schrodinger, Chadwick** |
| 1. **See p. 16 in your notebook!** |
| 1. **Hit gold foil with radioactive particles. They should have gone straight through because they thought the atom was uniform, but they bounced off sometimes in weird angles. This told them that there was a dense nucleus in the center, and the rest of the atom was mostly empty space** |
| 1. **Electrons travel randomly in orbitals – that the orbitals are areas of “probability clouds” of where you are likely to find an electron, but we don’t know exactly where they are. They do not travel in circular rings/orbits like Bohr thought** |
| 1. **3.45 x 10-3** |
| 1. **2.98 x 107** |
| 1. **Should be one number then the decimal, then the rest of the numbers (2.46)** |
| 1. **Should be one number then the decimal, then the rest of the numbers 5(.4)** |
| 1. **Kilo** |
| 1. **deci** |
| 1. **meter, liter, gram** |
| 1. **king henry died by drinking chocolate milk (or you may have a different one, this is just the one I’m used to)** |
| 1. **34020000** |
| 1. **29400** |
| 1. **2700** |
| 1. **0.000085** |
| 1. **Protons+neutrons** |
| 1. **The number of protons (and electrons if it is a neutral atom)** |
| 1. **61** |
| 1. **Cl = 17, 18, 17 Ba = 56, 81, 56 C = 6, 6, 6 Ne = 10, 10, 10** |
| 1. **It has the same number of protons and electrons, but a different number of neutrons. It is the same element, just a different version of the element.** |
| 1. **Carbon-12 has 6 neutrons, carbon-13 has 7, and carbon-14 has 8 neutrons** |
| 1. **Br-80 = 35, 45, 35 Br-83 = 35, 48, 35** |
| 1. **Bromine-80 because the average atomic mass listed on the periodic table is 79.90 and this is closer to Bromine-80 than bromine-83** |
| 1. **6.02 x 1023** |
| 1. **To help us convert from grams to molecules, because atoms are very small it is hard to count them in small “chunks” so we use the mole because it is a large “chunk” we can count in – like counting eggs by the dozen** |
| 1. **You use the mass from the periodic table and you add up the mass of each atom in the molecules. You do not round because you don’t know which isotopes you are using, so you want to use the “average mass” so you are most closely going to match what you would find in nature** |
| 1. **107.87 g/mol** |
| 1. **74.1 g/mol** |
| 1. **174.27 g/mol** |
| 1. **68.17 g/mol** |