NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DATE DUE: \_\_\_\_\_\_\_\_\_\_\_\_

TEACHER: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**/28**

**Year 9 Term 1 – Chemistry**

**HOMEWORK SHEET No. 1 – Learning Goal 1**

|  |  |
| --- | --- |
| /5 | **1.** True or false?* 1. An atom has the same number of protons as it does electrons.
	2. The atomic number is the number of protons in an atom.
	3. An atom always has the same number of neutrons as it does protons.
	4. The mass number is the number of neutrons in an atom.
	5. The mass number is the number of particles in the nucleus.
 |
| /5 | **2.** Copy and complete this table for the three types of subatomic particles.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Subatomic particle** | **Letter used as Symbol** | **Charge** | **Mass** | **Location** |
|  |  |  | 2000 times heavier than an electron |  |
|  |  | none |  |  |
| electron |  |  | Almost negligible |  |

 |
| /5 | **3.** Draw a picture of an Oxygen atom showing the * 8 protons,
* 8 neutrons,
* 8 electrons,
* the nucleus, and
* electron shells.
 |
| /4 | **See the source image4.** Pictured are all the elements you need to create a timeline for the development of the modern model of atomic structure. Use the blank timeline to write years and beside each year write the important discovery at that time.John Daltonatom is a ballJ. J. Thomsonp+e–plum pudding |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| /4 | **5.** Four groups all measured the boiling point of water. Their measurements were:

|  |  |
| --- | --- |
| Anh’s group | 100.1ºC |
| Fiona’s group | 98.9ºC |
| Joe’s group | 75.7ºC |
| Sharnika’s group | 101.2ºC |

After the experiment Joe claimed that the boiling point of water was approximately 76ºC.1. Were his experimental observations replicated?
2. What do you make of his claim?
3. According to this data, calculate the boiling point of water.
 |
| /5 |

|  |  |  |
| --- | --- | --- |
| **Term** | **Correct description** | **Wrong Description** |
| radiation |  | breakdown of the nucleus of an atom leading to release of radioactive particles |
| alpha (α) |  | describes any electro magnetic wave given out by an object |
| beta (β) |  | a type of radioactive emission, that cannot pentrate skin |
| gamma (γ) |  | a type of radioactive emission, that cannot pentrate thin sheets of metal |
| geiger counter |  | a type of radioactive emission that has a short wavelength in the electromagnetic spectrum  |
| marie curie |  | used to measure radioactive decay |
| proton |  | helped discover the basics of radioactivity and won two nobel prizes for science |
| neutron |  | one of the particles of an atom, described as positive |
| electron |  | one of the particles of an atom, described as having a neutral charge |
| radioactive |  | one of the particles of an atom, found in the shells |

**6.** Write the correct description of each term in the space beside it. The correct description for each term is somewhere in the column called “wrong description” |