**Bohr Diagrams – Notes Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**What are they?** A way of **drawing** an atom – to show **protons**, **neutrons** and **electrons**

**How do you draw them?**

1. Draw a **circle** for the nucleus
2. Include the protons (**p**) and the neutrons (**n**) in the nucleus
3. Draw **shells** and fill them with the appropriate **electrons**
	1. Shell 1 – can have 2 electrons
	2. Shell 2 – can have 8 electrons
	3. Shell 3 – can have 8 electrons
4. We will only draw the first **20** elements as Bohr diagrams – so we will only use the first **3** shells.
5. When drawing an **ion** – add or subtract the appropriate # of **electrons** to make the outer shell **full**

**Now let’s practice together:**

|  |  |
| --- | --- |
| Atom of Nitrogen | Ion of Nitrogen N3- |
|  |  |
| Atom of Beryllium | Ion of hydrogen H+ |
|  |  |

**Now – you practice on your own**

Draw – the following – as neutral atoms

**Now, draw the following as ions:**

|  |  |
| --- | --- |
| Beryllium 2+ | Chlorine -1 |
|  |  |
| Calcium 2+ | Phosphorus -3 |
|  |  |