8. The Periodic Table

Starter Quiz ·

IGCSE Chemistry Name: _____ Score: _____

1. Elements in the Periodic Table are arranged in order of increasing:

   ☐ discovery date

   ☐ proton (atomic) number

   ☐ mass only

   ☐ colour

2. How many electrons are in the outer shell of a Group I element?

   _____

3. How many electrons are in the outer shell of a Group VII element?

   _____

4. Which are properties of transition metals? (Select all that apply.)

   ☐ hard and strong

   ☐ very low density

   ☐ form coloured compounds

   ☐ high melting points

   Tick every correct option.

5. Noble gases are unreactive because they have:

   ☐ a full outer shell of electrons

   ☐ one outer electron

   ☐ seven outer electrons

   ☐ no electrons

6. Elements in the same group have the same number of:

   ☐ neutrons

   ☐ outer-shell electrons

   ☐ protons

   ☐ shells

7. Going down Group I, reactivity:

   ☐ increases

- ☐ becomes zero
- ☐ decreases
- ☐ stays the same

8. Going down Group VII, reactivity:
   - ☐ stays the same
   - ☐ doubles
   - ☐ increases
   - ☐ decreases
9. Transition metals are more reactive than Group I metals.

   ☐ True ☐ False
10. Other elements react in order to reach a full, stable outer shell like the noble gases.

    ☐ True ☐ False

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1. **proton (atomic) number**

   They are ordered by atomic number.

2. **1**

   Group I elements have one outer electron.

3. **7**

   Halogens have seven outer electrons.

4. **hard and strong; form coloured compounds; high melting points**

   They are dense, not low-density.

5. **a full outer shell of electrons**

   A full outer shell is very stable.

6. **outer-shell electrons**

   Same outer electrons → similar properties.

7. **increases**

   The outer electron is lost more easily down the group.

8. **decreases**

   Halogens get less reactive down the group.

9. **False**

   False. Transition metals are much less reactive than the alkali metals, which is why iron and copper can be used for structures and pipes.

10. **True**

    A full shell is the stable arrangement elements aim for.