***Dataset variables examination:***

Looking at the train dataset:

* 82 columns total.
* First column: number of elements.  
  *(Meaning all the items are probably some sort of composite material.)*
* Last column: critical temperature we want to derive.

So, removing the first and last column, we’re left with 80 columns.

After looking at the GitHub page for this project, and examining the **tc.RData** file there, we can divide the remaining 80 columns into **8 groups** of **10 measurements**.

Each **group** is an **atomic property**, with 10 different methods used to measure that property.

Atomic Properties (8 total):

1. Atomic Mass
2. First Ionization Energy
3. Atomic Radius
4. Density
5. Electron Affinity
6. Fusion Heat
7. Thermal Conductivity
8. Valence

Measurements (10 total):

1. Mean
   1. Mean
   2. Weighted Mean
   3. Geometric Mean
   4. Weighted Geometric Mean
2. Entropy
   1. Entropy
   2. Weighted Entropy
3. Range
   1. Range
   2. Weighted Range
4. Standard Deviation
   1. Standard Deviation
   2. Weighted standard Deviation