

5A – PATTERNS AND TRENDS

Analysis

Table 1 – Element identities

Unknown #	Element	Evidence
1		
2		
3		
4		
5		
6		
7		

Questions

1. Which elements were the easiest to determine? Explain your answer.
2. Look at the noble gases. What is happening to the density of the noble gases as you move down the group? Would you expect xenon, the next noble gas down the group, to have a higher or lower density than krypton? Explain your answers.

3. Some of the properties listed on the information cards were not yet known or understood in Mendeleev's time. Could you have completed this table without all the information provided?

4. One of the properties that you may not be familiar with is ionization energy. Use your textbook to define ionization energy.

5. Describe the general trend for ionization energy as you go down a group.

6. Going across the period (from left to right), describe the general trend in ionization energy.

7. Choose another property listed on the element cards that you are not familiar with and look up its definition. Describe your chosen property's trends both down a group and across a period.