

Name : \_\_\_\_\_ Date : \_\_\_\_\_

## Periodic Table Trends Worksheet

Use the periodic table and your knowledge of periodic trends to answer the following questions.

- In each case below, circle the element that has the characteristics indicated.
  - largest radius: Li or F
  - smallest radius: Be or Ca
  - highest ionization energy: Br or K
  - lowest ionization energy: O or S
  - highest electronegativity: Al or B
  - lowest electronegativity: C or F
  - highest reactivity: K or Na
  - lowest reactivity: Cl or Br
- Circle the correct statements.
  - Magnesium has a larger atomic radius than sodium and beryllium.
  - Helium has the highest ionization capacity, and francium has the lowest ionization capacity.
  - Sulfur has a much lower electronegativity than calcium.
  - A non-metal atom is much larger than a metal atom.
  - Silicon is a metalloid because it has characteristics between metals and non-metals.
  - Elements with three energy levels are bigger than elements with five energy levels.
  - Na holds on to its electrons more readily than K.
  - It is more challenging to remove an electron from Mg than Cl.
- Provide the element name and chemical symbol.
  - Period 3, Group 14 (IVA or 4A):
  - Period 5, Group 2 (IIA or 2A):
  - Period 2, Group 17 (VII A or 7A):
  - Period 6, Group 7 (VII B or 7B):
  - Period 4, Group 12 (IIB or 2B):
  - Period 3, Group 2 (IIA or 2A):

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## Answers

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  - Silicon** is a metalloid because it has characteristics between metals and non-metals.
  - Elements with three energy levels are bigger than elements with five energy levels.
  - Na** holds on to its electrons more readily than K.
  - It is more challenging to remove an electron from Mg than Cl.
- Provide the element name and chemical symbol.
  - Period 3, Group 14 (IVA or 4A): **Silicon (Si)**
  - Period 5, Group 2 (IIA or 2A): **Strontium (Sr)**
  - Period 2, Group 17 (VII A or 7A): **Fluorine (F)**
  - Period 6, Group 7 (VII B or 7B): **Rhenium (Re)**
  - Period 4, Group 12 (IIB or 2B): **Zinc (Zn)**
  - Period 3, Group 2 (IIA or 2A): **Magnesium (Mg)**