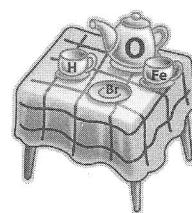


# Create a Table

## Properties of the Elements

Name \_\_\_\_\_

Date \_\_\_\_\_ Period \_\_\_\_\_



### Purpose

To create your own periodic table of the elements from data given on element cards.

### Materials

Create a Table card deck

### Instructions

1. Work in your groups with one set of cards.
2. Find Be, Mg, Ca, and Sr in the deck of cards, and arrange them in a column the way Mendeleev did. These cards are all yellow. Look for similarities and differences in these cards. Find at least one pattern or trend, and describe it to your group.
3. With your team, decide how to organize the rest of the cards into a table. Try to organize them in a way that produces as many patterns as possible.

### Questions

1. What characteristics did you use to sort the cards?
2. What patterns appear in your arrangement? List at least four.
3. Where did you put H and He? What was your reasoning for their placement?
4. Did you notice any cards that didn't quite fit or that seemed out of order? Explain.

Beryllium hard,  
dull gray solid  
metal

Be  
9.0

does not react with water found in  
solid BeCl<sub>2</sub>

Magnesium moderately hard,  
silvery solid  
metal

Mg  
24.3

reacts only slightly with water found in  
solid MgCl<sub>2</sub>

Calcium moderately hard,  
silvery solid  
metal

Ca  
40.1

reacts with water found in  
solid CaCl<sub>2</sub>

Strontium moderately soft,  
silvery white solid  
metal

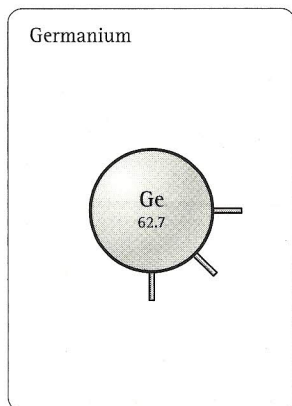
Sr  
87.6

reacts vigorously with water found in  
solid SrCl<sub>2</sub>

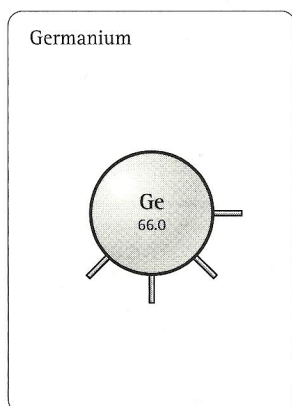
**5. Making Sense** Below are four possible cards for the element germanium, Ge.

a. Where does germanium belong in the table?

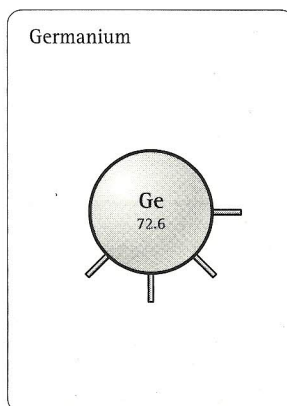
b. Which card seems most accurate to you? What is your reasoning?



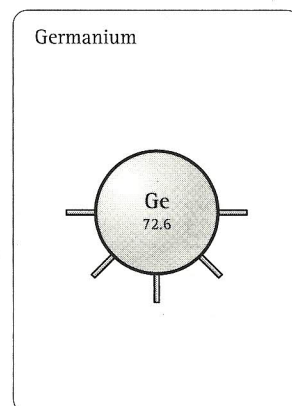
A.



B.

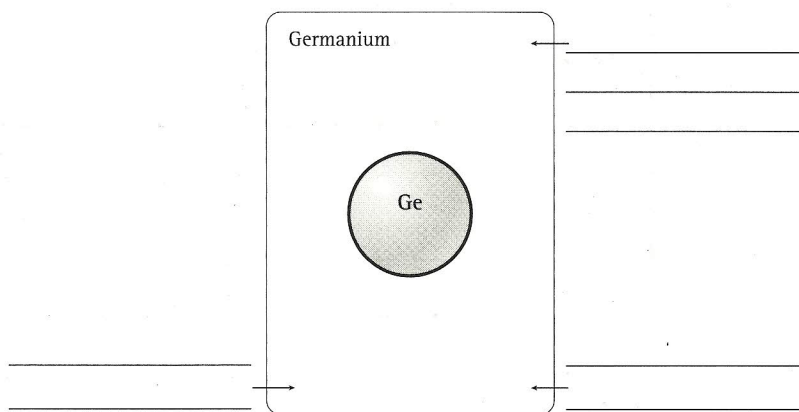


C.



D.

c. Copy your selection from part b. What would you add to the three empty corners to complete the card?



**6. If You Finish Early** The element cesium, Cs, is located just below rubidium, Rb, on the modern periodic table. Create an element card for cesium.