

Name \_\_\_\_\_

AP CHEM

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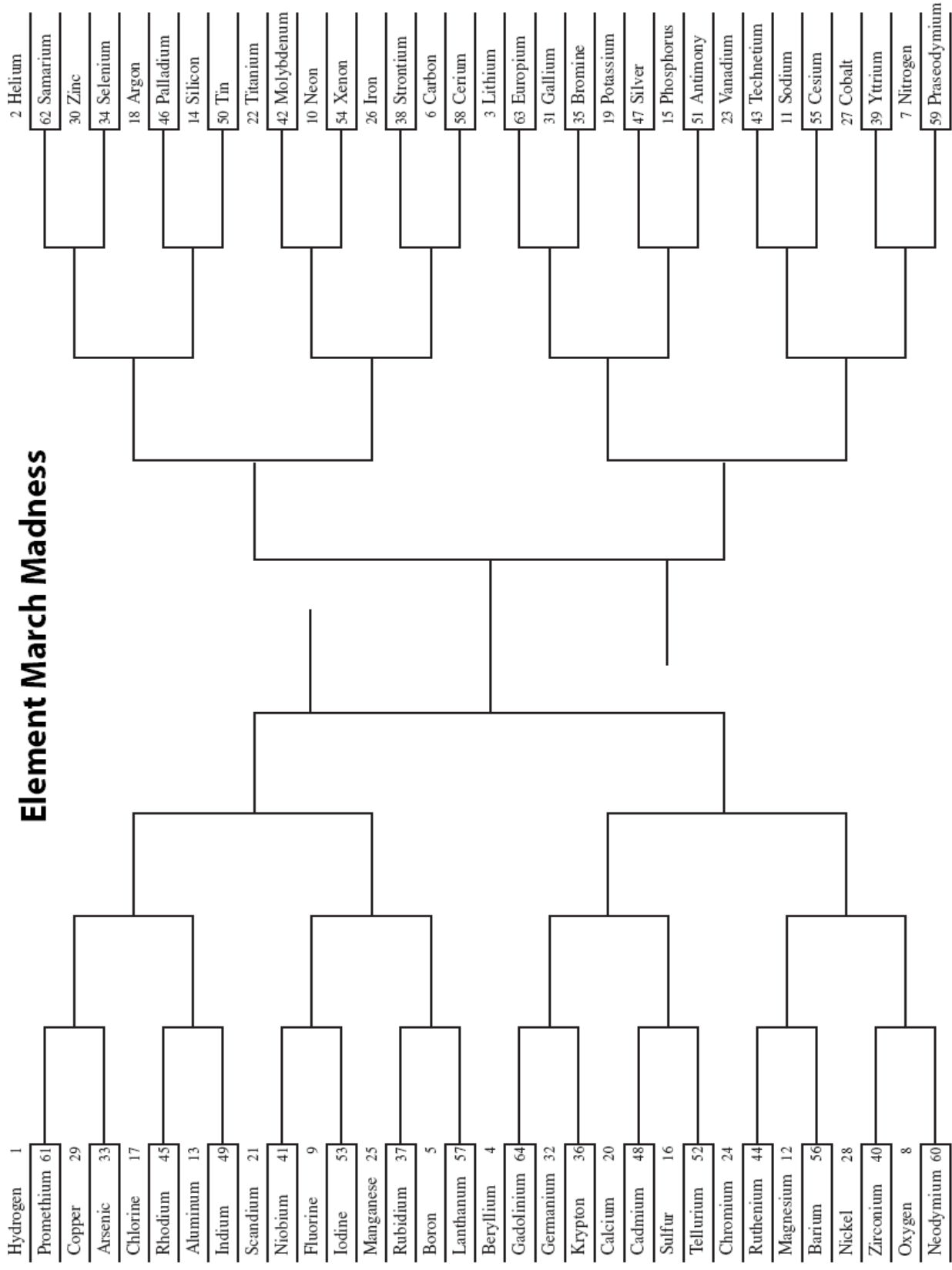
## Element March Madness

### Tournament Rules

Here are the rules for predicting the winners in each round of Element March Madness. In the event of a tie in the properties of two competing elements in any round of the tournament, the element with the larger atomic mass always wins. If all of your answers are correct you will earn 10 extra credit points added as a homework grade. This assignment is due on Monday, March 31<sup>st</sup> 2008. I suggest you consult several sources before making a decision. On occasion internet sites list incorrect information.

- First round: Research the date of discovery of each element. In each bracket, **the element that was discovered in an earlier year (in its free element form) wins** and proceeds to the second round. If an element has been known since ancient times, assign it a discovery date of zero.
- Second round: Compare the ionization energy of the elements in each bracket. **The element with the lower ionization energy is the winner** and advances to the Sweet 16.
- Third round (Sweet 16): Compare the group numbers of the elements—**the winner is the element with the larger group number using the international (IUPAC) system (Groups 1–18)**.
- Fourth round: **The element with the smaller atomic radius wins this round and earns a trip to the Final Four.** Use the atomic or covalent radius only, not the van der Waals radius.
- Semifinals (Final Four): **The element with the fewer amount of valence electrons advances to the finals.**
- Finals: **The element with the higher melting point is the winner!**

# Element March Madness



## Version 2 Answers