

The MARTIN Game

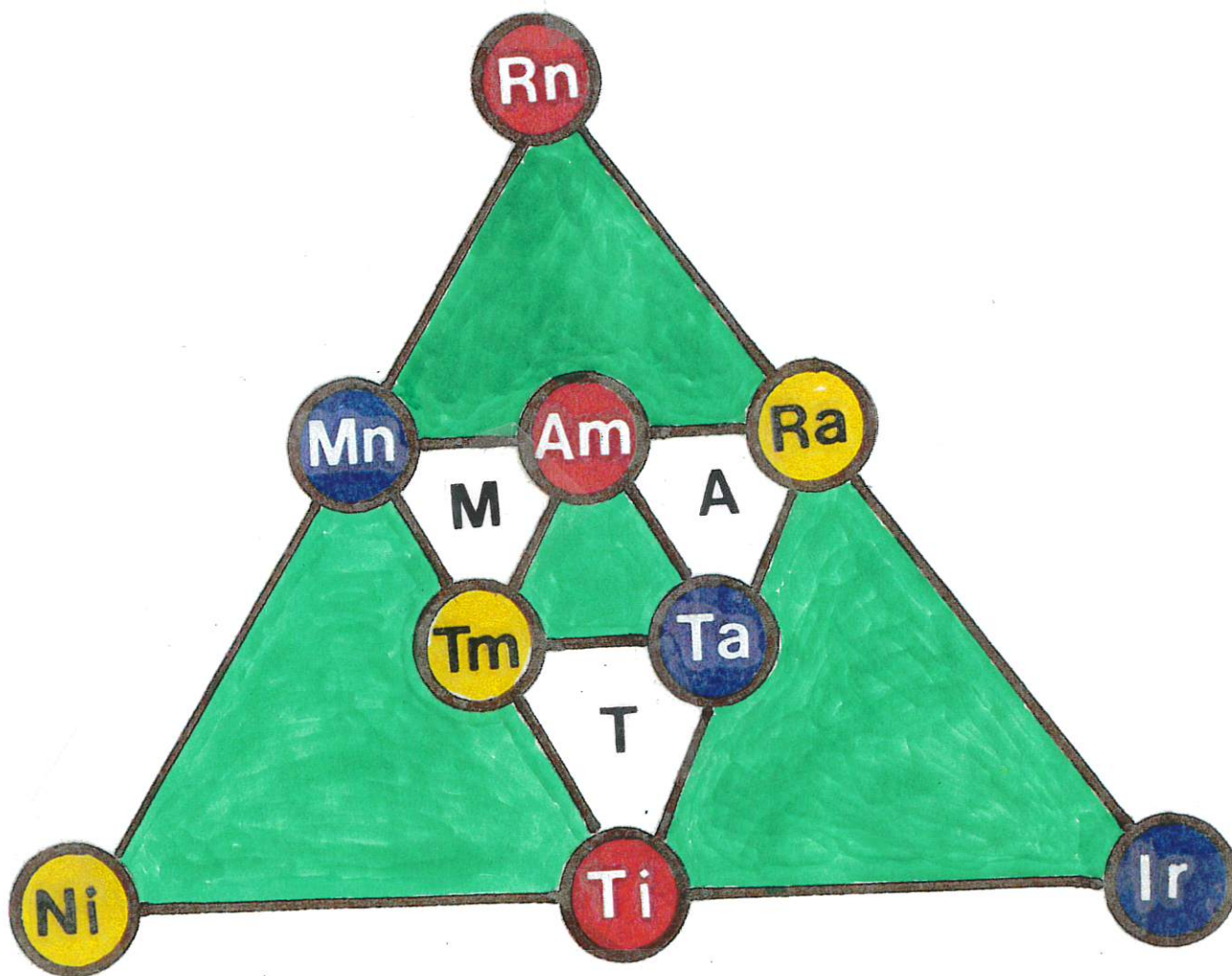
by Jeremiah and Karen Farrell

The MARTIN diagram uses each letter of the name to form nine chemical symbols.

The Game. Two players alternately select nodes trying to obtain three nodes with a common letter or three nodes of the same color obtaining all the letters of MARTIN.

The three sides of the large triangle and the three sides of the small labeled triangles have the six letters of MARTIN.

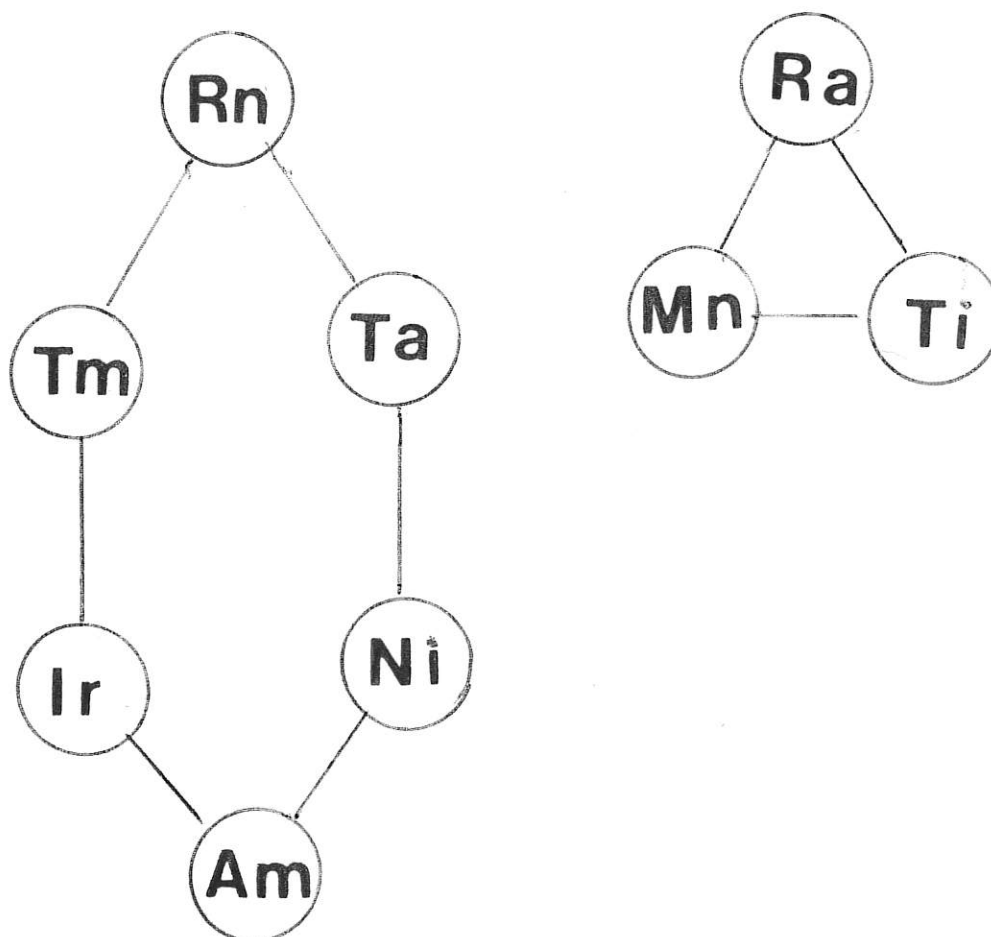
To be completely fair both players have only four plays and if First cannot win in four moves the win is awarded to Second.



How to win at MARTIN.

First can always win by opening with one of Mn, Ra, or Ti. If Second chooses another of these three, First selects the last one. When Second then chooses any other node he will be threatening and when First blocks the threat First will have an unstoppable double threat.

To be more complete we show the following graph of misses, i.e., nodes with no letter in common.



After First chooses one of the three, say Ra, and Second chooses one of the six, say Tm, First forces one of Tm's misses, here Rn or Ir. Suppose Ir is forced by First choosing Rn. Then First has a double threat with Am.

This game is a variation of a diagram used by the Glasgow mathematician Thomas H. O'Beirne described in the article that follows.

"Configuration Games", *Tribute to a Mathematician*, by Jeremiah Farrell, Martin Gardner, and Thomas Rodgers, edited by Barry Cipra, Erik D. Demaine, Maritn L. Demaine and Thomas Rodgers, AK Peters, Wellesley, Massachusetts, 2005.