

1/15/2019

1. Describe the following as precisely as you can:
 - (a) a natural number
 - (b) a rational number
 - (c) an integer
 - (d) a real number (!)
2. Prove or disprove the following:
 - (a) There is a largest natural number.
 - (b) The sum of two rational numbers is a rational number.
 - (c) The sum of a rational and an irrational number is a rational number.
 - (d) Between any two rational numbers there is another rational number.
 - (e) Between any two rational numbers there is an irrational number.
3. Find three different ways to place a queen and bishop on the board to checkmate the black king. Find three different ways to place a queen and knight on the board to checkmate the black king.

