Question 1:

Two players take turns removing 1, 2, 3, or 4 objects from a set of 16 identical objects (without replacing them.) The winner is the player who removes the last object. Find a winning strategy for one of the players (the one who plays first or second).

Question 2:

If a and b are both greater than -1, find the $\lim\_{n\to \infty }n^{b-a}\frac{1^{a}+2^{a}+…+n^{a}}{1^{b}+2^{b}+…+n^{b}}$.