Tiebreakers

AMSA-MAMS Pi Day Mathematics Tournament

March 10, 2018

1. What is the smallest real root of $27x^3 + 54x^2 + 36x - 19 = 0$?

2. In a single elimination tournament, it took 314 games to declare a winner. How many participants were in the tournament? Assume that no games resulted in a tie.

3. A 3x3x3 cube is split into 27 1x1x1 cubes. What is the distance between the center of the 3x3x3 cube and one of the corner 1x1x1 cubes.