

Sarah Magno

Attendance Quiz 9

Part I:

- ① In what year did Ramanujan go to England? 1914
- ② Who was the woman who accompanied her spouse to the Ramanujan Conference in 1987 in Illinois? Cyndi Garvan
- ③ What is Dr. Z's Erdős-Bacon number? 2

Part II:

- ① Since $x = 3 + \frac{1}{3 + \frac{1}{3 + \frac{1}{3 + \dots}}}$, by self-similarity, we obtain

$$x = 3 + \frac{1}{x}$$

Rewriting this equation, we see that

$$x^2 - 3x - 1 = 0$$

By the quadratic formula, $\frac{3 \pm \sqrt{9 - 4(1)(-1)}}{2} = \frac{3 \pm \sqrt{13}}{2} = x$. But since we constructed x to be positive, then

$$x = \frac{3 + \sqrt{13}}{2}$$