

Playsheet 7

Don't Be So Irrational!

MATH 130-02
Thursday, February 19, 2009

Directions: Groups should consist of three or four people. Work together on each problem; do not delegate different problems to different people. Submit one **neatly written** write-up per group. Remember to use complete sentences as appropriate and explain your reasoning. That is, **show your work!**

1. Modify our argument that $\sqrt{2}$ is irrational to prove that $\sqrt{3}$ is also irrational.

2. Express $0.4177417741774177\dots$ as a fraction.

3. Express $0.314646464646\dots$ as a fraction.

4. Is $0.1010010001000010000010000001\dots$ rational or irrational? Explain.

5. Find a rational number between 2.71828 and 2.718281 .

6. Find an irrational number between 2.71828 and 2.718281 .