Class Prep (prepare for Friday, January 19)

Finish your addition and multiplication tables for $\mathbb{Z}_5$ and $\mathbb{Z}_7$ and look for patterns in them. Also, make a few PHiZZ units in preparation for someday soon making your own dodecahedron (for which you'll need 30 PHiZZ units, 10 in each of three different colors).

Problems (due Friday, January 26 at the beginning of class)

1. Explain how $T_0(x)$ and $T_1(x)$ as defined on the Details of Fujimoto's Method handout connect to the folding process in Fujimoto's Method (i.e., write out a full explanation of Question 4 on that handout).

2. (a) Find the binary decimal expansion for $\dfrac{1}{9}$

   (b) Connect the binary decimal expansion for $\dfrac{1}{9}$ to the folding process of Fujimoto's method as in Questions 2 and 3 on the Details handout.

   (c) Use the discrete dynamics approach to show how Fujimoto's method leads to the correct binary decimal expansion for $\frac{1}{9}$ as in Questions 5 and 6 on the Details handout.

Friday's Celebration of Learning (Quiz)

Be prepared to

- Explain how to use Fujimoto's approximation method to approximate $\frac{1}{n}$ for some odd n.
- Find a binary decimal expansion for $\frac{1}{n}$ for some odd n.
- Show how to connect Fujimoto's approximation method to the binary decimal expansion for some n.