1. Project 1

1.1. **Part 1.** Set up a discrete two-compartment model to simulate the concentration of Ibuprofen in the bloodstream.

The first stage should correspond roughly to the patient's digestive system, and the second to the bloodstream.

Assume that 15% of the drug that is in the digestive system is absorbed into the bloodstream every 10 minutes.

Once in the bloodstream, assume that the drug has a half-live of 2 hours

Use an initial dose of 200mg

1.2. **Part 2.** Use your model to simulate the concentration in the bloodstream if 200mg is given every 4 hours.