The quiz is to provide feedback to you and to me about how well you’ve followed the material so far. It is primarily testing your familiarity with the notation. The quiz will take 15 minutes. Write your response on the sheet.

Please print your name here:

Last Name ___________________  First ___________________  Lab ___________________

Consider a state machine given by

\[(States, Inputs, Outputs, update, initialState)\]

where

\[States = \{x \in \text{Reals} \mid x = n \cdot \pi \land n \in \{1, 2, 3\}\},\]

\[Outputs = States \cap \{x \in \text{Reals} \mid n \cdot \pi \land n \in \text{Naturals}\},\]

\[Inputs = \text{Naturals} \cap \{1, 2, 3, 4, 5\} \cap \{-1, 0, 1, 2, 3\},\]

\[\forall s \in States, x \in Inputs, \quad \text{update}(s, x) = (x \cdot \pi, s), \quad \text{and}\]

\[\text{initialState} = \pi.\]

Draw the state transition diagram.

Solution: