2. a. \((-\infty, 0) \cup (1, \infty)\)
   \(\to t_0 \to -\infty\)

b. all points \(\to t_0 \to +\infty\).

4. a. 
   \(0\) is not in the domain.
   1 and -1 are fixed.
   all others are points of prime period 2.