Discrete HW #2 worksheet

1. Given the initial population $P_0$, graphically determine the populations for the next 6 time increments in each of the following models for $P_{t+1}$ as a function of $P_t$. Show the cobweb graph, and mark the population values on the horizontal axis.

a. 

\[ P_{t+1} \]

\[ P_0 \rightarrow P_t \]

b. 

\[ P_{t+1} \]

\[ P_0 \rightarrow P_t \]

c. 

\[ P_{t+1} \]

\[ P_0 \rightarrow P_t \]

d. 

\[ P_{t+1} \]

\[ P_0 \rightarrow P_t \]
2. Circle all equilibrium points, and use a cobweb diagram to classify whether each equilibrium point is stable or unstable.