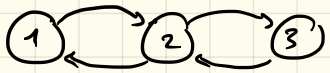
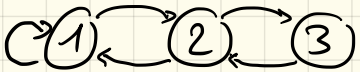
MCAA lecture 3: quiz

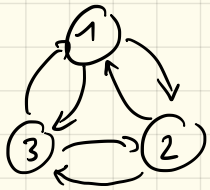
1) Which of the following Markov chains admits:
   - a unique stationary distribution?
   - a (unique) limiting distribution?

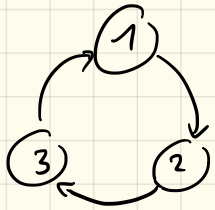
a) 

b) 

c) 

d) 

e) 

f) 

2) Which of the following statements is correct?

a) If X is an irreducible and null-recurrent chain
then a1) its state space S is infinite
a2) it does not admit a stationary distribution

b) If X is finite and irreducible, then it admits a unique limiting and stationary distribution.

c) If X does not admit a unique stationary distribution, then some states are not positive-recurrent.

d) If X admits a stationary distribution (not necessarily unique), then some states are positive-recurrent.