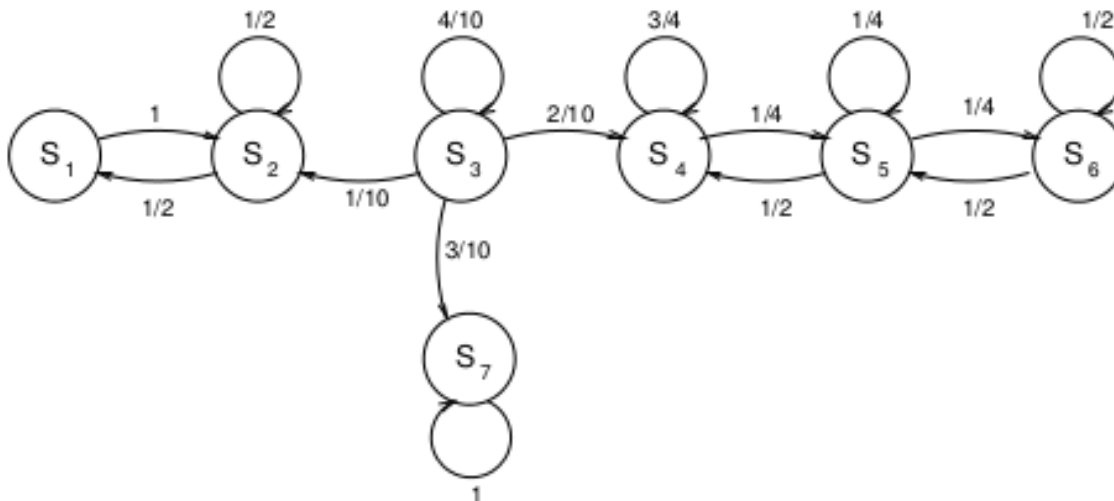# 14. Exercise: Recurrent and transient states

None due May 29, 2020 05:29 IST

Exercise: Recurrent and transient states

4 points possible (ungraded)

Consider the following transition probability graph:

Decide whether each of the following statements is true or false.

1. State S_1 is a transient state.

Select an option ⌄   **Answer:** False

2. State S_5 is a recurrent state.

Select an option ⌄   **Answer:** True

3. State S_3 is a transient state.

Select an option ⌄   **Answer:** True

4. There are two recurrent classes.

Select an option ⌄   **Answer:** False

Solution:

1. False. States S_1 and S_2 form a recurrent class.

2. True. States S_4, S_5, and S_6 form a recurrent class.

3. True. The chain will eventually exit state S_3, enter one of the recurrent classes, and never return to state S_3.

4. False, there are 3: the two identified in parts (1) and (2), plus a third recurrent class consisting of only the single state S_7.

Submit	You have used 0 of 1 attempt

ⓘ   Answers are displayed within the problem

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Exercise: Recurrent and transient states

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? [Staff] Question 4. (exactly or not)   9
By the statement "There are two recurrent classes.", do you mean exactly 2? Because one could interpre...

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Hi, as I said in the title my progress bar isn't showing lectures 24-26 and Pset 10 not showing up and the ...