

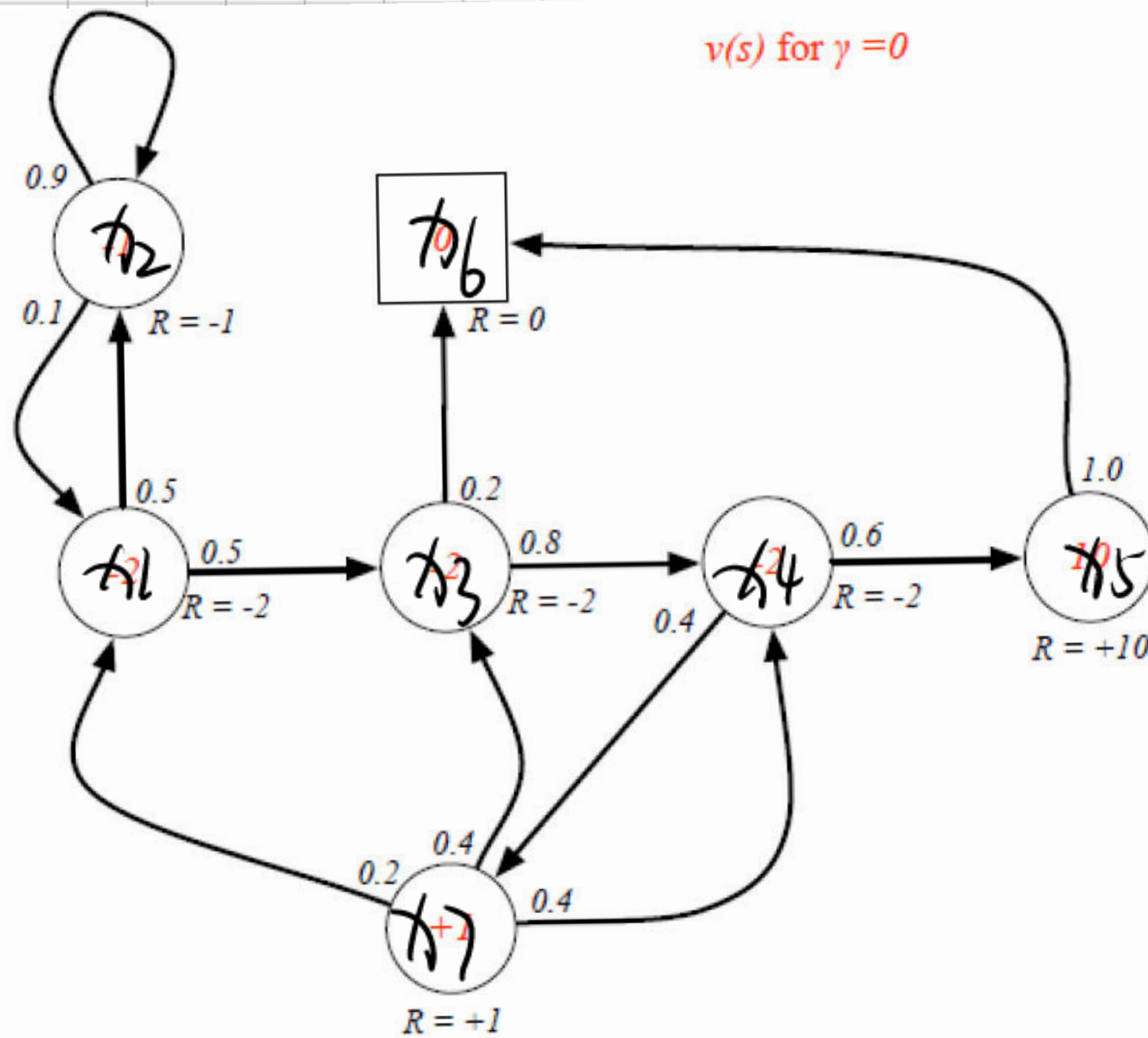
新生项目

课

程

2022.4

# 解方程



$$\begin{aligned}
 ① & x_1 = -2 + \gamma [0.5x_2 + 0.5x_3] \\
 ② & x_2 = -1 + \gamma [0.9x_2 + 0.1x_1] \\
 ③ & x_3 = -2 + \gamma [0.8x_4 + 0.2x_6] \\
 ④ & x_4 = -2 + \gamma [0.6x_5 + 0.4x_7] \\
 ⑤ & x_5 = 10 + \gamma [x_6] \\
 ⑥ & x_6 = 0 \\
 ⑦ & x_7 = 1 + \gamma [0.4x_4 + 0.4x_3 + 0.2x_1]
 \end{aligned}$$

令  $\gamma = 0.5$  ①②③④⑦ 五未知量五方程. 可解

$$\begin{aligned}
 x_1 - 0.25x_2 + 0.25x_3 &= -2 \\
 0.05x_1 - 0.55x_2 &= -1 \\
 x_3 - 0.4x_4 &= -2 \\
 x_4 - 0.3x_5 &= -2 \\
 -0.1x_6 &= -2 \\
 -0.2x_7 &= -2 \\
 x_7 &= 1
 \end{aligned}$$

$$\begin{pmatrix} 1 & -\frac{1}{4} & -\frac{1}{4} & 0 & 0 & 0 & 0 \\ -0.5 & 0.55 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 1 & -0.4 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 & -0.2 \\ -0.1 & 0 & -0.2 & -0.2 & 0 & 0 & 1 \end{pmatrix} \begin{pmatrix} a \\ b \\ c \\ d \\ e \end{pmatrix} = \begin{pmatrix} -2 \\ -1 \\ -2 \\ 1 \\ 1 \end{pmatrix}$$

$$\begin{pmatrix} x_1 \\ \vdots \\ x_7 \end{pmatrix} = \begin{pmatrix} -0.1864 \\ 0.10955 \\ -0.1545 \\ 0.1636 \\ 10 \\ 0 \\ 0.072 \end{pmatrix}$$



Project 1

Link Prediction

Project 2

Learning and Strategy

