# 16 Extra Problems

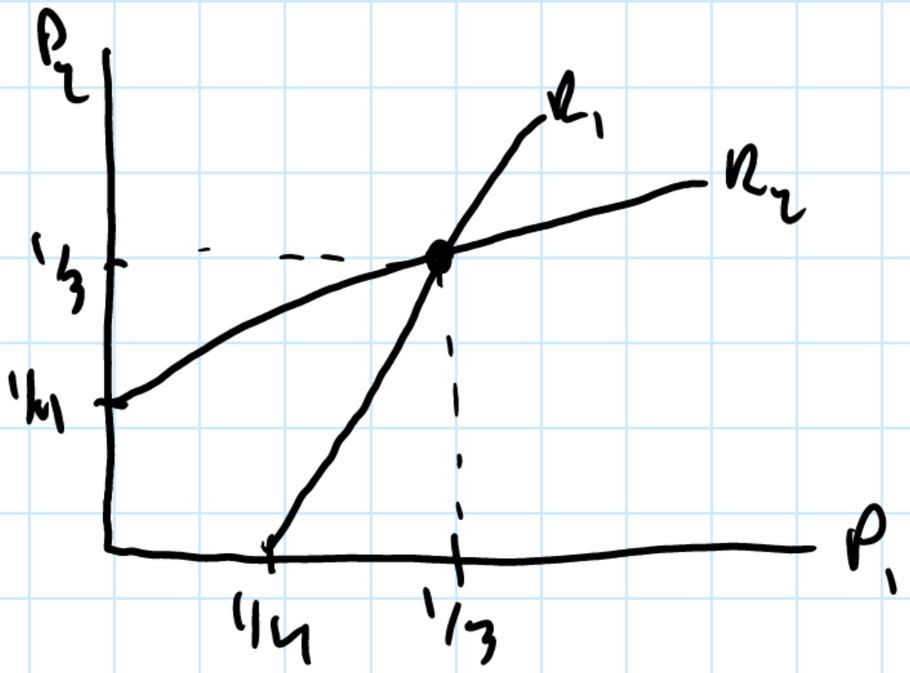
Friday, November 6, 2020 10:05 AM

$C_1 = C_2 = 0$

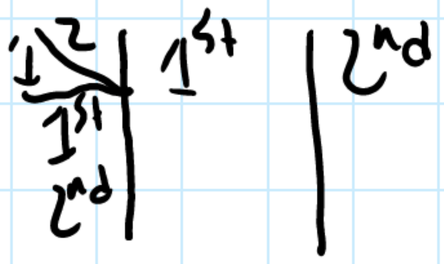
$q_1 = \frac{1}{2} - P_1 + \frac{1}{2}P_2 \qquad q_2 = \frac{1}{2} - P_2 + \frac{1}{2}P_1$

$\pi_1 = (P_1 - C_1)q_1 = P_1(\frac{1}{2} - P_1 + \frac{1}{2}P_1) \rightarrow \frac{d\pi}{dP_1} = \frac{1}{2} - P_1 + \frac{1}{2}P_2 - P_1 = 0 \rightarrow P_1 = \frac{1}{4} + \frac{P_2}{4}$

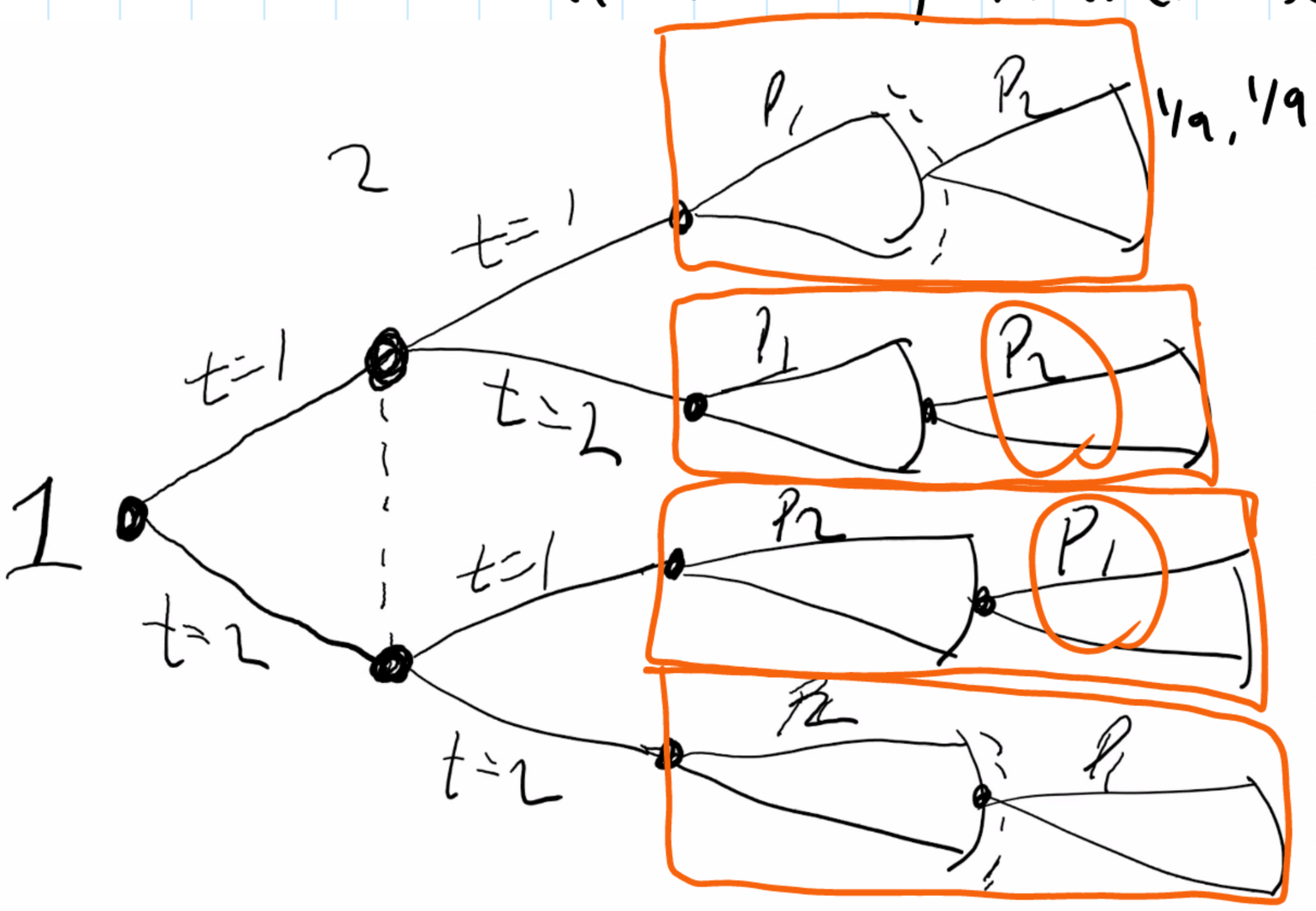
$\hookrightarrow P_1 = 1/4$








How many PROPER subgames?




6 subgames

$u_1 = u_2 = \frac{1}{3}(\frac{1}{2} - \frac{1}{3} + \frac{1}{6}) = \frac{1}{9}$ ← if simultaneous moves

if $P_1$ goes first...