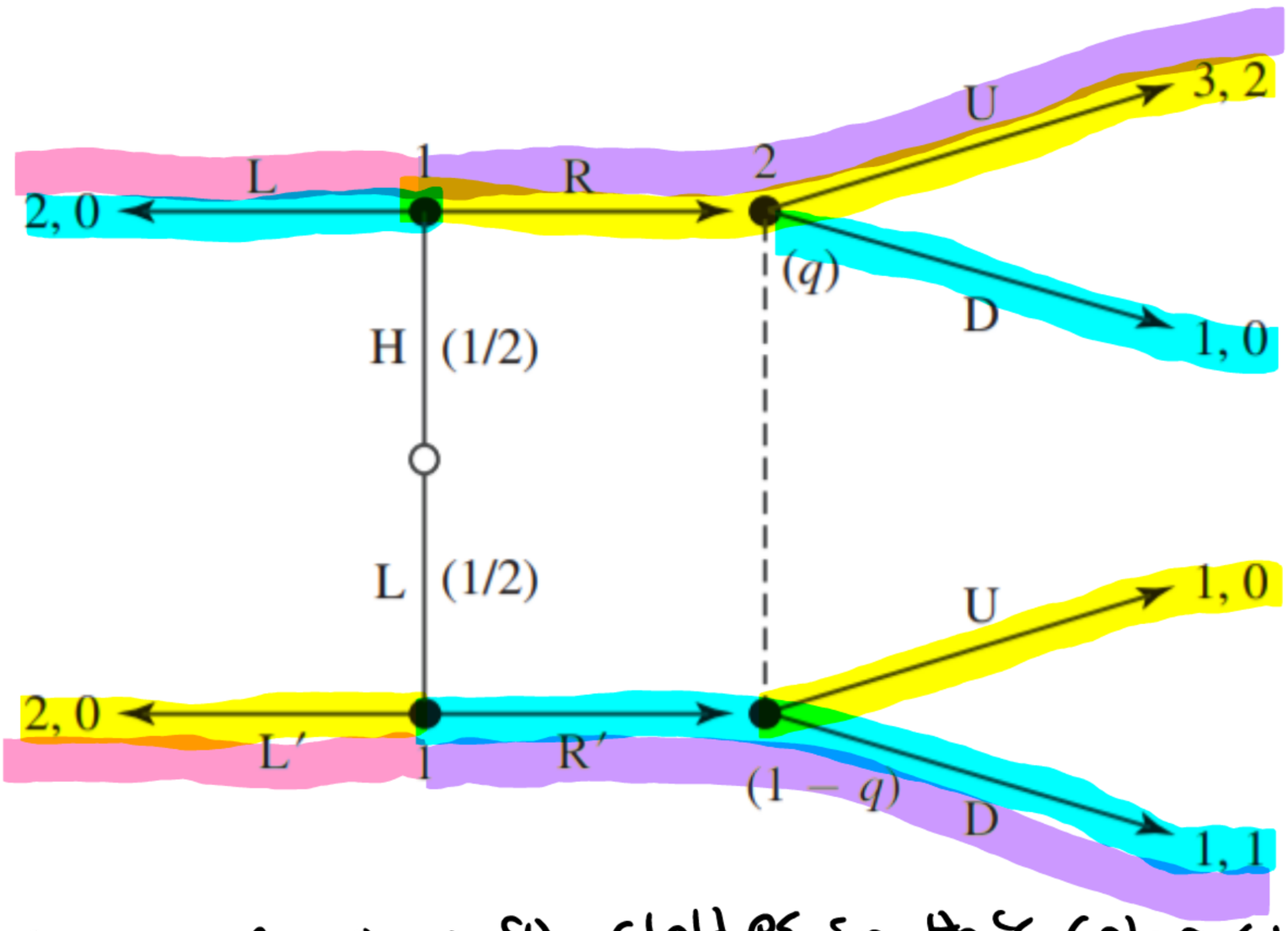
HW 28.3

Sunday, November 29, 2020 3:31 PM

Posted solution review

3. Consider the following game of incomplete information.



I know people with clothes in this color scheme

(a) Does this game have a *separating* perfect Bayesian equilibrium? If so, fully describe it.

LL', U

$q = .5 \cdot 1 / .5 \cdot 1 + .5 \cdot 0 = 1$

LR', D

$q = .5 \cdot 0 /$ doesn't matter $= 0$

(b) Does this game have a *pooling* perfect Bayesian equilibrium? If so, fully describe it.

$q = .5 \cdot 0 /$ doesn't matter $= 0$

LL', D $q \leq 1/3$ is Pooling PBE

$U_2(U|R) = 2q + 0(1-q) = 2q$
$U_2(D|R) = 0q + 1(1-q) = 1-q$

$2q > 1-q \rightarrow q > 1/3$

If $q < 1/3$, they tend towards L due to better Payoffs

RR'
$q = .5/(2 \cdot .5) = 1/2$

$U_2(U|R) = 2(1/2) + 0(1-1/2) = 1$
$U_2(D|R) = 0(1/2) + 1(1-1/2) = 1/2$

$1 > 1/2$ so P_2 chooses U

RR' is not sustainable