Working with a partner, use the story given below to fill in the game tree. Label all actors, branches and payoffs of the tree correctly. Then solve for the critical value of $p$ and interpret your results. Turn in this page when complete.

**The Jerry Springer Game**

Chris and Pat are having a relationship, and Chris comes to believe that Pat has been unfaithful. Chris must choose to confront Pat with the allegation, or do nothing; Pat will then choose to end the relationship or stay and distrust Chris.

Chris prefers staying in a relationship with some distrust to living with the secret, but prefers breaking up least of all. Unfortunately, Pat may be one of two types. A **Forgiving** Pat prefers the status quo most, but values the relationship with Chris enough to forgive the allegation rather than break up. A **Vengeful** Pat, on the other hand, would rather be out of the relationship than stay with someone without trust or stay with someone who is suspicious.
Solve these games and interpret your resulting value of $p$.

1. Bush and Hussein

\[ \begin{array}{c}
\text{Nature} \\
\text{resolute} \\
\text{irresolute} \\
p \\
1-p
\end{array} \]

\[ \begin{array}{c}
\text{Bush} \\
\text{Not threaten} \\
\text{Threaten} \\
\text{Comply} \\
\text{Not Comply}
\end{array} \]

\[ \begin{array}{c}
\text{Hussein} \\
\text{Not Comply} \\
\text{Comply} \\
\text{Not Comply}
\end{array} \]

\[ \begin{array}{c}
(4, 1) \\
(2, 4) \\
(3, 2) \\
(1, 3) \\
(4, 1) \\
(2, 4) \\
(3, 3) \\
(1, 2)
\end{array} \]
3. The Cuban Missile Crisis

- Nature
  - resolute
    - $p$
  - irresolute
    - $1-p$

- Kennedy
  - resolute
    - Blockade
      - Diplomacy
        - Press
          - Back down
            - (2, 5)
  - irresolute
    - Invasion
      - Blockade
        - Diplomacy
          - Press
            - Back down
              - (5, 3)
      - Invasion
        - War (1, 1)
          - Press
            - Back down
              - (3, 4)
      - War (1, 1)
        - Press
          - Back down
            - (4, 2)
        - (2, 2)
          - (5, 5)
        - (3, 3)
          - (4, 4)
2. EU-Japan Trade Liberalization

Nature

Free trade

$P$

Protectionist

$1 - P$

EU

- No concession
  -SQ (2, 2)

Japan

Concession

Accept

Reciprocate

$(3, 1)$

$(1, 3)$

$(4, 4)$

Concession

Accept

Reciprocate

$(3, 3)$

$(1, 4)$

$(4, 1)$
4. The Double-Zero Option

Nature

- Committed Reformer
  - Gorbachev
    - SQ (3, 1)
      - Reject: (4, 2)
      - Accept: (2, 3)
    - Counterpropose: (1, 4)
  - Propose deep cuts
    - Reagan
      - SQ (3, 4)
        - Reject: (4, 2)
        - Accept: (2, 3)
      - Counterpropose: (1, 1)
    - Don’t propose
      - Reagan
        - SQ (3, 4)
          - Reject: (4, 3)
          - Accept: (2, 2)
        - Counterpropose: (1, 1)
      - Propose deep cuts
        - Reagan
          - SQ (3, 4)
            - Reject: (4, 3)
            - Accept: (2, 2)
          - Counterpropose: (1, 1)

- Reluctant reformer
  - Gorbachev
    - SQ (3, 4)
      - Reject: (4, 2)
      - Accept: (2, 3)
    - Counterpropose: (1, 1)
  - Propose deep cuts
    - Reagan
      - SQ (3, 4)
        - Reject: (4, 3)
        - Accept: (2, 2)
      - Counterpropose: (1, 1)
    - Don’t propose
      - Reagan
        - SQ (3, 4)
          - Reject: (4, 3)
          - Accept: (2, 2)
        - Counterpropose: (1, 1)
      - Propose deep cuts
        - Reagan
          - SQ (3, 4)
            - Reject: (4, 3)
            - Accept: (2, 2)
          - Counterpropose: (1, 1)

- 1 - p - q
  - Reagan
    - SQ (3, 1)
      - Reject: (4, 2)
      - Accept: (2, 3)
    - Counterpropose: (1, 4)
  - Propose deep cuts
    - Reagan
      - SQ (3, 4)
        - Reject: (4, 3)
        - Accept: (2, 2)
      - Counterpropose: (1, 1)
    - Don’t propose
      - Reagan
        - SQ (3, 4)
          - Reject: (4, 3)
          - Accept: (2, 2)
        - Counterpropose: (1, 1)
      - Propose deep cuts
        - Reagan
          - SQ (3, 4)
            - Reject: (4, 3)
            - Accept: (2, 2)
          - Counterpropose: (1, 1)
PS 160 Intro to World Politics
Games with Uncertainty III

Solve games 1, 2, 3, and 4, and interpret your resulting value. Follow directions on game 5, making sure to answer questions.

1. Kohl, Gorbachev, and Berlin

```
Nature
  ____  p
|      |
|      |
Committed reformer
  ____  1-p
|      |
|      |
Hardliner

Kohl

Do nothing
  ____  SQ (2,2)
|      |
|      |
Invade Berlin
  ____  WAR (0,1)
|      |
|      |
Overtures
  ____  Gorbachev
|      |
|      |
Do nothing
  ____  SQ (2,2)
|      |
|      |
Invade Berlin
  ____  WAR (0,3)
|      |
|      |
Overtures
  ____  Gorbachev
|      |
|      |
Do nothing
  ____  REFORM (3,3)
|      |
|      |
Gorbachev

Gorbachev

Do nothing
  ____  SQ (2,2)
|      |
|      |
Invade Berlin
  ____  WAR (0,3)
|      |
|      |
Overtures
  ____  Gorbachev
|      |
|      |
Do nothing
  ____  REFORM (3,1)
|      |
|      |
Gorbachev
```
6. Bush and Hussein

\[
\begin{align*}
\text{Resolute Bush} & \quad q \\
\text{Irresolute Bush} & \quad 1-q \\
\text{Nature}_1 & \quad p \\
\text{Nature}_2 & \quad 1-p \\
\text{Resolute Hussein} & \quad q \\
\text{Irresolute Hussein} & \quad 1-q \\
\end{align*}
\]
5. Appeasement at Munich, 1939

1. Do backwards induction. Does Hitler’s initial move reveal any information to Chamberlain about his type? If so, what?

2. Solve for $p$ - just apply the formula mechanically. Do not try to interpret it in the regular fashion. Instead, compare your result to the backwards induction above. Does your $p$ value make sense? Why or why not? What does it suggest for Chamberlain?

3. Does Hitler’s second move reveal information about his type? If so, what?
4. Yom Kippur War

Nature

honest
$p$

deceptive
$1-p$

Israel

Do nothing
Mobilize
Preempt

Egypt and Syria
War (5, 0)

Attack
Not attack

Egypt and Syria
War (5, 0)

Attack
Not attack

Egypt and Syria
War (5, 0)

Attack
Not attack

Egypt and Syria
War (5, 0)

Attack
Not attack

Egypt and Syria
War (5, 0)

Attack
Not attack

(0, 4)
(15, 10)
(3, 2)
(7.8)
(0, 10)
(15, 2)
(3, 6)
(7, 5)
2. Rome Statute on the International Criminal Court

Nature

internationalist

$\frac{p}{1-p}$

isolationist

UN

Broad jurisdiction

Accept

(4, 4)

US

Reject

(1, 0)

Narrow jurisdiction

Accept

(3, 3)

US

Reject

(0, 0)

Broad jurisdiction

Accept

(4, 0)

US

Reject

(0, 1)

Narrow jurisdiction

Accept

(3, 2)

US

Reject

(0, 0)
3. World Agricultural Protection Negotiations

Nature

Pro-development

Pro-protectiveism

WTO

Propose strong rules

Propose weak rules

EU

Accept (5, 3)

Reject (2, 1)

Accept (3, 2)

Reject (1, 0)

Accept (5, 0)

Reject (2, 3)

Accept (3, 4)

Reject (1, 2)