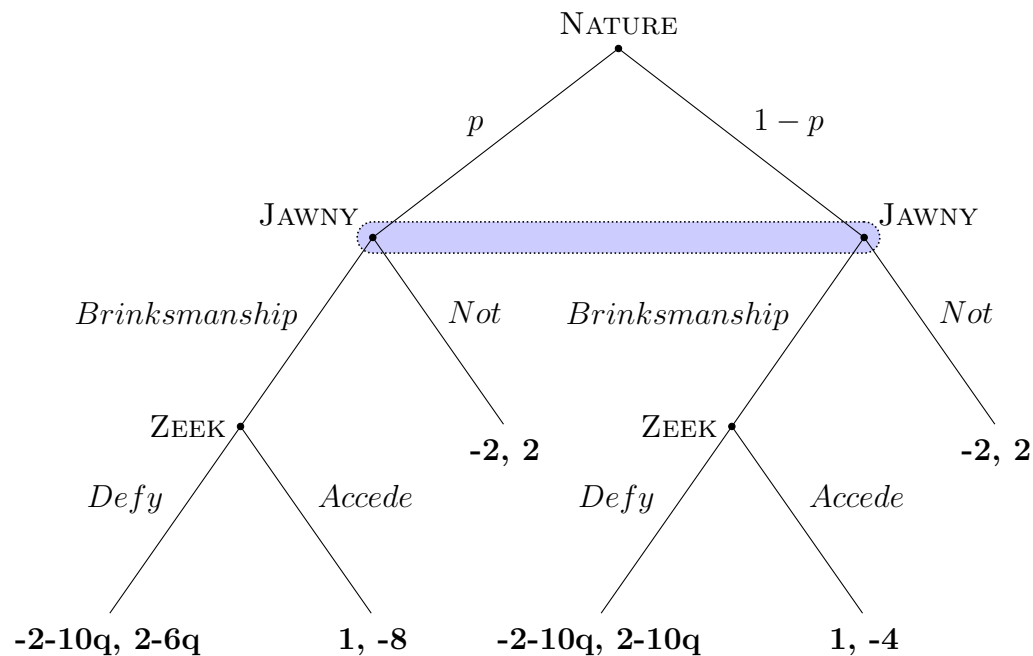# Quiz 6

Consider the following game tree below. Zeek and Jawny are roommates and drinking companions. Jawny and Zeek split the cost of Buds Lite, but recently Zeek has been having more than his *fair* share, so Jawny is considering issuing a threat against their current arrangement; however, Jawny doesn't really want to end the arrangement. He would prefer that Zeek is made aware of his current behavior and perhaps impending drinking problem. Because of this, Jawny considers a pure threat too risky and brinksmanship, perhaps, a better strategy.

Further, Jawny is unsure of Zeek's true type. Suppose nature (or his parents) select Zeek's type with probability p, the probability that Zeek is an inconsiderate roommate and does not care that he is exploiting Jawny's munificence. Examine the following tree and answer the subsequent questions where Jawny's payoff is listed first..

NATURE

p $1-p$

JAWNY   JAWNY

Brinksmanship   *Not*   *Brinksmanship*   *Not*

ZEEK   **-2, 2**   ZEEK   **-2, 2**

Defy   *Accede*   *Defy*   *Accede*

-2-10q, 2-6q   **1, -8**   **-2-10q, 2-10q**   **1, -4**

a. List the strategies for all players

b. Find the effectiveness condition for this game.

c. Find the acceptability condition for this game

d. For what values of p, the probability that Zeek is a bad roommate, is the pure threat ($q = 1$) acceptable?

e. For what values of p is the pure threat unacceptable but brinksmanship still possible.

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