1. Alpha and Beta, two oligopoly rivals in a duopoly market, choose prices of their products on the first day of the month. The following payoff table shows their monthly payoffs resulting from the pricing decision they can make.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  | Alpha's price | |
|  |  | High |  |  | Low |
|  | **High** | **$200**,$300 |  |  | **$50**, $350 |
|  |  |  |  |  |  |
| **Beta's Price** |  |  |  |  |  |
|  | **Low** | **$300**,$150 |  |  | **$75**, $200 |

1. Is the pricing decision facing Alpha and Beta a prisoners’ dilemma? Why or why not?
2. What is the cooperative outcome? What is the non-cooperative outcome?
3. If Alpha and Beta make their pricing decision just one time, will they choose the cooperative outcome? Why or why not?
4. Can Alpha make a credible threat to punish Beta with a retaliatory price cut? Can Beta make a credible threat of a retaliatory price cut?
5. For each of the following events, explain whether Beta would be more or less likely to cooperate:
   * 1. Beta expects to be able to cheat for more than two months before getting caught by Alpha.
     2. Alpha announces that it will match any price cut by Beta, and it will do so immediately following any price cut by Beta.
     3. Alpha hires a new CEO who has a reputation for relentlessly matching price cuts by rivals, even after rivals are ready to resume cooperative pricing.
     4. Alpha alters the design of its product to make it more desirable to some consumers than Beta’s product.