

		<i>EU</i>	
		ABATE	POLLUTE
<i>US</i>	A B A T E	,	,
	P O L L U T E	,	,

Cost to Abate: 6 for each country that invests

Gains from Abatement: if only one country abates: 8 for each
if both countries abate: 10 for each

Extra cost if everyone pollutes: -2 loss for each country

NOTE:

1. Fill in the box with the correct values.
2. Solve the game.
3. what are the equilibria if the game is simultaneous?
4. What kind of a game is it?
5. What is the unique equilibrium in the sequential game if US moves first?
6. What is the unique equilibrium in the sequential game if EU moves first?
7. What is the outcome if EU and US manage to Cooperate? Is there a side-payment needed? If yes, what is the minimum side-payment required?

Repeat the exercise (all 7 steps) with the following information:

Cost to Abate: 4 for each country that invests

Gains from Abatement: if only one country abates: 2
if both countries abate: 8

NOTE: Gains are much larger in this case if BOTH abate.

		<i>EU</i>	
		ABATE	POLLUTE
<i>US</i>	A B A T E	,	,
	P O L L U T E	,	,

In the following Prisoner's Dilemma game, what is the minimum penalty that must be paid by the country that does not respect the treaty (pollutes) to the one that abates to solve the dilemma and make the treaty self-enforcing?

		<i>EU</i>	
		ABATE	POLLUTE
<i>US</i>	A B A T E	1 , 1	-40 , 30
	P O L L U T E	30 , -40	0 , 0