

**Problem 1.** Yzma and Kronk have been arrested for treason. The emperor can't find enough evidence to prove that they're guilty, so he offers them a deal. If Yzma confesses to her crimes and blames Kronk, then Kronk will have to spend 3 years in jail, and Yzma goes free. On the other hand, if Kronk confesses, then Kronk goes free and Yzma spends 3 years in jail. If they both confess and blame each other, then both of them get 2 years in jail. If neither person confesses to treason, they both get sentenced for the lesser crime of public shouting, and they both get 1 year in jail.

Pick one person to be Yzma and one person to be Kronk. Without discussing your plans, each of you should decide whether to confess or stay silent, then announce your intention simultaneously. Did you get a good outcome?

Now, do the same thing, except you're allowed to talk before making your decision. Does communication help? Remember, you (and your partner) can lie about your intentions!

Fill in the following table with the amount of jail time you'll get in each situation:

	... the other prisoner CONFESSES	... the other prisoner STAYS QUIET
You CONFESS, and...		
You STAY QUIET, and...		

- If the other prisoner confesses, what's the best option for you?
- If the other prisoner stays quiet, what's your best option?
- What happens if both prisoners choose their best option, following this logic? Is this a good outcome?

Now try playing the prisoners game 10 times in a row, and try to minimise your total jail time. Is it better to play nice or to screw over the other player?