Experiment Directions

You are participating in an experiment consisting of **two sets of ten rounds**. After the first set of ten rounds there will be a short break. We request that you remain in your seat during this time and not talk with your neighbors. After a few minutes the second set of ten rounds will start.

At the beginning of the first set of ten rounds, every participant will be randomly assigned a part: some of you will make decisions throughout the experiment in the role of "Player X," whereas others will make decisions throughout the experiment in the role of "Player Y." You will be informed what your role is via your monitor. In each round, every player X will be assigned to a player Y. These two players will then interact in the current round. Assignment of interaction partners occurs in every round of each set, always on a random basis. The interaction is anonymous. At no time do you know which other participant you are interacting with. Throughout the entire experiment you may communicate with the other participants only via the computer program.

In each round, every pair of players X and Y will have the opportunity to make profits, in the following manner. Profits and losses are measured in *experimental currency units (ExCU)*. The two players can make a contract with each other. In such a case, the following rules apply: Player X proposes contract terms to Player Y. Player Y can decide whether he/she accepts or rejects the proposed contract. If he/she rejects the contract proposal, the round ends immediately. Neither player receives a payment in this round. If Player Y accepts the contract, he/she is obligated to render services. He/she can choose between two activities, Activity A and Activity B.

In the case that Player Y accepts a contract, he/she must always render services. This brings Player X a profit. The profit may amount to either 50 ExCU or 100 ExCU. Which profit it is depends on chance. Nevertheless, the probability of a higher or lower profit depends on the activity chosen by Player Y. If Player Y decides on Activity A, the profit will have a 50% chance of being 50 ExCU and a 50% chance of being 100 ExCU. If Player Y selects Activity B, there will be a 20% chance that the profit will be 50 ExCU and an 80% chance that the profit will be 100 ExCU.

The two activities cost Player Y different amounts. For Activity A, Player Y must bear costs of 13 ExCU. Activity B costs Player Y 20 ExCU. Player X incurs no costs from these activities.

Table 1 summarizes the profit probabilities and the costs to Player Y resulting from each of the two activities. Notice that **Player X cannot see which activity Player Y has actually chosen**.

Table 1:   Profit probabilities and costs of the activities

	Profits of 50 ExCU for Player X	Profits of 100 ExCU for Player X	Costs for Player Y (in ExCU)
Activity A	50%	50%	13
Activity B	20%	80%	20

The contract: At the beginning of each round, Player X establishes contract terms which he/she offers to Player Y. These terms set the amount that Player X will pay Player Y for the latter's services. Since Player X cannot observe which activity Player Y chooses, the payment cannot be directly dependent upon the choice of activity. Nonetheless, the payment amount can depend on the profits actually made. That is, Player X can propose paying an amount v upon realization of 50 ExCU and an amount w upon realization of 100 ExCU. Only amounts in full (nonfractional) ExCU which are greater than or equal to zero may be used. If Player X wishes to propose the same payment for both payment levels, he/she must establish identical amounts for v and w.

Summary of the decision process: At the beginning of each round Player X must propose contract terms to Player Y, in which the former sets the payment amount for the services rendered by the latter. Player Y can accept or reject the contract. If he/she **rejects** the contract, the round is immediately over and neither player receives any money in this round. If Player Y **accepts** the contract, he/she must render services and decide between Activity A and Activity B. The two activities cost him/her different amounts and influence the profit probabilities of Player X. As soon as Player Y has decided on one of the two activities, the profit for Player X is determined by a lottery. In this lottery the chances of making a particular profit depend on the activity chosen by Player Y, as shown in table 1. At the end of each round in which a contract has been made, Player Y is paid by Player X in accordance with the terms of the contract. Each player is informed of his/her personal payoff in the round just finished.

Payoffs in the case of a contract: The payoff for Player X is derived from the profit made as a result of the services provided by Player Y, minus the payment to Player Y laid down in the contract. The payoff for Player Y is derived from the payment from Player X established in the contract, minus the costs arising from engagement in Activity A or Activity B. A player's payoffs for each round, which may also be negative (less than zero), are added up as credit. The credit accumulated by a player after 10 rounds determines his/her success in that set of rounds.

Table 2: Possible payoffs for a round in the case of a contract (in ExCU)

	Profit of 50 ExCU	Profit of 100 ExCU
Payoff for Player X	50 – v	100 – w
Payoff for Player Y doing Activity A	v – 13	w – 13
Payoff for Player Y doing Activity B	v – 20	w – 20

Available information: Each participant can use the **F2 key** to call up a **round-by-round summary of his/her data in the current set so far**. If the **F1 key** is pressed, a short version of these experiment directions appears on the monitor.

Cash payment: After the second set of rounds, the toss of a coin, randomly selected, determines whether the payoff will be for the first or the second set. For each of you, the deciding factor for the cash payment will be your personal **credit after the ten rounds of the set in question**. The greater your credit, the more money you will receive. Your payoff amount in deutsche marks (DM) is calculated by the following formula.

Your payoff in DM = 30 + 0.05 (your credit – constant)

The constant has been fixed by the experimenters. However, you will not be told what it is until after the experiment. Please note that the constant has different values for Player X and Player Y. If you earn a credit amount that is greater than this constant, you will be paid more than DM 30. If, on the other hand, you earn a credit amount that is lower than the constant, you will be paid less than DM 30. How much more or less than DM 30 you receive depends on the difference between your credit and the relevant constant for your player type. Each ExCU is worth 5 pfennigs.