General Instructions (Y)

Welcome to the experiment. You are about to participate in an experiment on decision making. We thank you for participating in our economic study.

Throughout the experiment you must not communicate with other participants. If you have a question or need assistance of any kind, please raise your hand, and a study administrator will come to your seat and you can discuss the question. The violation of the rule against communication will result in exclusion from the study and from all payments.

This experiment consists of a total of **7 parts**:

- In the **first part**, we ask you to answer a general knowledge quiz.
- In the **second part**, we ask you to make an estimate.
- In the **third part**, you are paired with another participant in your group and we ask both of you to perform a ball-catching task.
- In the **fourth part**, you have the possibility of making another estimate.
- In the **fifth part**, you are paired with yet another participant in your group and we ask both of you to make distributional decisions.
- In the **sixth part**, we ask you to make one risky decision.
- In the **seventh part**, we ask you to complete a questionnaire.

After you read the general instructions, you can proceed to the detailed instructions for the 7 parts of the experiment. The amount of money you will be paid in this experiment depends on your decisions. Therefore, **it is in your interest to read the general and detailed instructions carefully.**

How are the payments in this experiment determined?

1. You receive a fixed payment of CHF 5 for participating in the experiment. Additionally, you will also receive the payments described below.
2. In the **first part**, your payment depends on your relative performance on the general knowledge quiz within your group of 12 participants. Here, your payment can go from 720 tokens to 60 tokens.
3. In the **second part**, your payment depends on the accuracy of your estimate and can be either 600 tokens or 0 tokens.
4. In the **third part**, your payment depends on your and your matched participant's performance on the general knowledge quiz and on the ball-caching task. Here, the average payment is about 5000 tokens.

5. In the **fourth part**, if you make another estimate your payment depends on the accuracy of your estimate and the realization of a random device.
6. In the **fifth part**, your payment depends on your distributional decisions, those of a matched participant, and on the realization of a random device. Here, your payment can go from 315 tokens to 185 tokens.
7. In the **sixth part**, your payment depends on your risky decision and on the realization of a random device. Here, your payment can go from 742.5 tokens to 0 tokens.

At the end of the experiment, the number of tokens you have earned will be exchanged into CHF using the exchange rate:

300 tokens = 1 CHF

Please know that **your anonymity is guaranteed**. Also, you will not be informed of the identity of the participants who are paired with you.

Overview of the experiment

First Part:

Answer a general knowledge quiz

↓

Second Part:

Make an estimate

↓

Third Part

Perform the ball-catching task

↓

Fourth Part:

Option to make another estimate

↓

Fifth Part:

Make distributional decisions

↓

Sixth Part:

Make one risky decision

↓

Seventh Part:

Complete a questionnaire

First Part:

Answer a general knowledge quiz

As you walked into this room you were randomly assigned to a group of 12 participants. You will be in this group for the entire experiment.

In this first part of the experiment you will be asked to provide answers to 46 questions of general knowledge. You have 20 minutes for this purpose. The more questions you will be able to answer correctly, the higher your earnings in this task. If you are the best among the 12 participants in your group (rank 1), you will earn 720 tokens and for each subsequent rank, the number of tokens earned decreases by 60. For example, if you are the second-best in your group (rank 2), you receive 660 tokens, if you are the third-best in your group (rank 3) you receive 600 tokens, …, if you are the worst participant in your group (rank 12), you receive 60 tokens. Ties will be broken randomly. Furthermore, **the more questions you will be able to answer correctly, the higher your earnings will be in the third part of the experiment**. Hence, it is in your interest to provide as many correct answers as possible.

Note that the correct answers to some questions imply that you give the first and last name of famous people. You will get a full credit only if you get the first and last name of the relevant famous person. If you only write the correct first name or last name, you will get half credit for your answer. Questions without answers are considered as incorrect.

Second Part:

Make an estimate

In this second part of the experiment, you will be asked to provide an estimate. This estimate is about your rank in the quiz. In the following, we will explain you how you will indicate your estimate of your rank and how this estimate influences your earnings.

a) How will you indicate your estimate of your rank?

The 12 participants in your group, including you, have answered the same quiz. According to the performance of all 12 participants in your group, each of them gets ranked. Rank 1 is assigned to the participant with the best performance in your group (in other words, this is the participant with the highest number of correct answers); rank 2 is assigned to the participant with the second best performance in your group,…, rank 12 is assigned to the participant with the worst performance in your group. We wish you to provide us with your estimate of your rank as an integer between 1 and 12.

b) How does your estimate of your rank influence your earnings?

The more your estimate of your rank is precise, the more likely it is that you will earn 600 tokens. In other words, the likelihood you earn the 600 tokens is greater the closer your estimate of your rank is to your real rank.

Your earnings in this part of the experiment are determined as follows.

First, the computer will randomly generate a number between 0 and 121. Each number from 0 to 121 is equally likely.

Second, the difference between your estimate of your rank and your real rank is your prediction error. If your prediction error multiplied by itself is not greater than the randomly generated number, you win **600 tokens**. Otherwise, you win **0 tokens**.

Important: You might wonder why we have chosen this payment rule. The reason is that this payment rule makes it optimal for you to state truthfully your estimate of your rank.

Example: Your estimate of your rank is 5, but given your relative performance at the quiz, your real rank is 8. In this case, your prediction error is 5-8 = -3. Your prediction error multiplied by itself is 9. If the randomly generated number is greater than or equal to 9, for example 35, then you win 600 tokens. If the randomly generated number is smaller than 9, for example 8, then you win 0 tokens.

Before the beginning of the third part of the experiment, you will be randomly matched to one of the other 11 participants in your group, henceforth referred to as *your partner*. In the third part of the experiment, your computer screen will display your partner's estimate of his/her rank and your partner's real rank. Similarly, your partner's computer screen will display your estimate of your rank and your real rank.

Please be aware that you will not be informed about your real rank until the very end of the experiment. Similarly, y**our partner will also not be informed about his/her real rank until the very end of the experiment.**

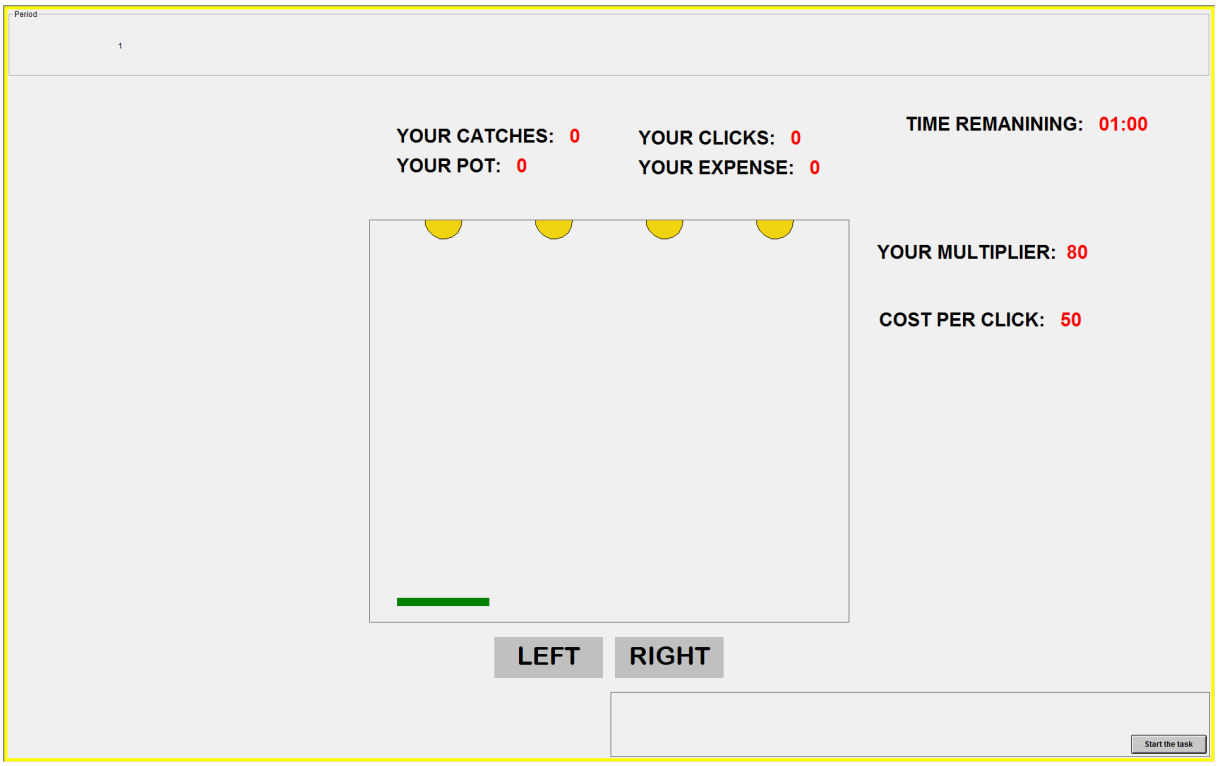
This is the end of the instructions of this part of the experiment. Do you have any questions? If you have questions, please raise your hand.

Third Part:

Perform the ball-catching task

In this part of the experiment, you will work on a computerized ball-catching task for **16 periods**. Each period lasts one minute. Please read these explanations carefully. You will only be able to continue the experiment after you answered correctly to control questions that will test your understanding of how your earnings in the ball-catching task are determined in each of the 16 periods.

In **periods 1 to 8**, there will be a task box in the middle of the task screen like the one shown below:



Once you click on the "Start the Task" button, the timer will start and balls will fall randomly from the top of the task box. You can move the tray at the bottom of the task box to catch the balls by using the mouse to click on the LEFT or RIGHT buttons. To catch a ball, your tray must be below the ball before it touches the bottom of the tray. When the ball touches the tray, your catches increase by one.

In **periods 1 to 8**, you will receive an amount (in tokens) for each ball you catch and incur a cost (in tokens) for each mouse click you make. At the beginning of each period you will be informed of your "multiplier". Your multiplier determines

the amount of tokens you will receive for each ball you catch and will be either 40, 100, 160, or 220 tokens. Your cost per mouse click will always be 50 tokens. Each of the four aforementioned multipliers will be valid during two consecutive periods as shown in the table below:

periods	1 and 2	3 and 4	5 and 6	7 and 8
Increasing multipliers	40	100	160	220
Decreasing multipliers	220	160	100	40

A random device will determine whether you will begin with a multiplier equal to 40 or, instead, begin with a multiplier equal to 220. Each of the two sequences of multipliers is equally likely.

In **periods 1 to 8**, the number of balls you caught so far (displayed as **YOUR CATCHES**), the number of mouse clicks you made so far (displayed as **YOUR CLICKS**), your accumulated amount of tokens so far (displayed as **YOUR POT**), and your accumulated mouse click costs so far (displayed as **YOUR EXPENSE**) are shown right above the task box. At the end of the period, **your pot** will be equal to your "multiplier" times your catches for the period and **your expense** will be equal to the cost per click of 50 tokens multiplied by your number of clicks for the period. At the end of the period, **your earnings** in tokens for the period will be **your pot** minus **your expense**. Please note that catching more balls by moving the tray more often does not necessarily lead to higher earnings because both **your pot** and **your expense** matter for determining **your earnings**.

At the end of each period from 1 to 8, you will see on your computer screen how many balls you caught, your clicks, and your earnings for that particular period.

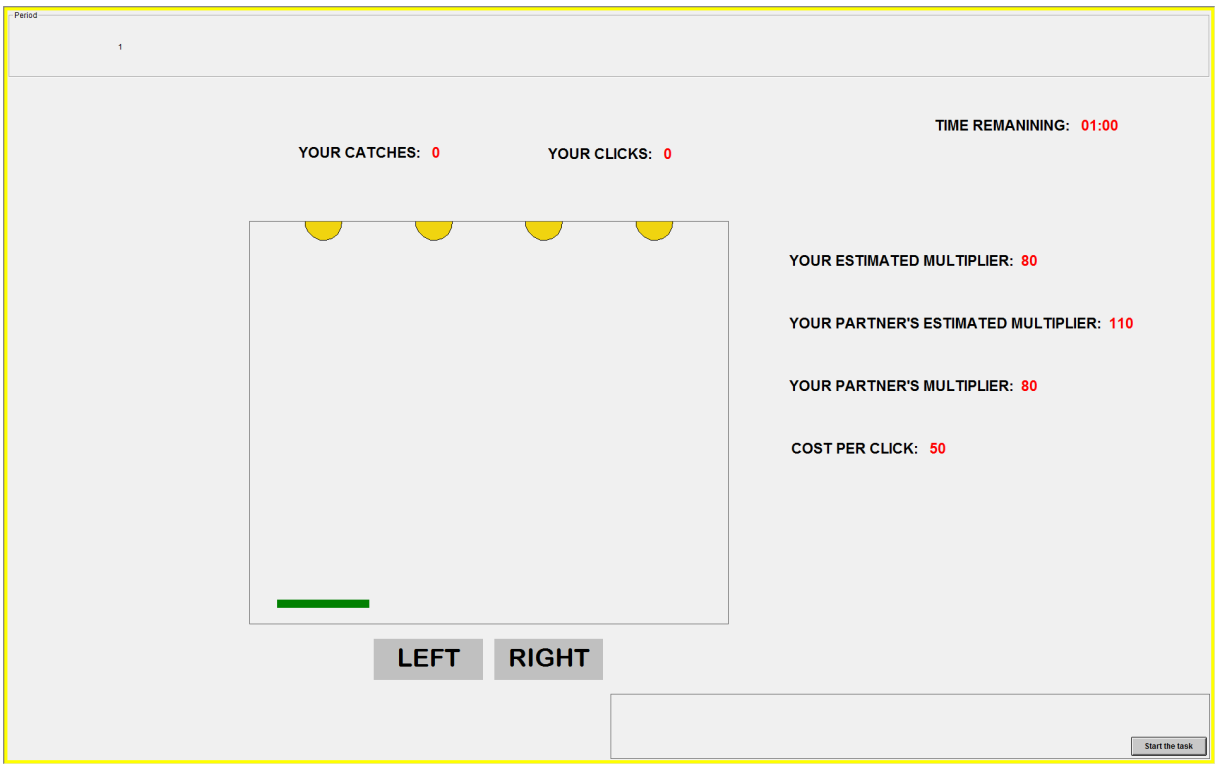
In **periods 9 to 16** your rank in the quiz determines your multiplier as follows:

rank in quiz	Multiplier
1	240
2	220
3	200

4	180
5	160
6	140
7	120
8	100
9	80
10	60
11	40
12	20

For example, if your rank in the quiz was 5, then your multiplier is 160. However, if your rank in the quiz was 8, then your multiplier is 100. In other words, the better your performance in the quiz is, the higher is your multiplier. Note that your partner's rank in the quiz determines his/her multiplier in the same way. For example, if your partner's rank in the quiz was 6, then his/her multiplier is 140.

In **periods 9 to 16** the task box in the middle of the screen is shown below:



As you can see above, the task box displays the time left (in seconds), your number of clicks and catches (updated in real time), your estimated multiplier associated to your estimated rank in the quiz, your partner's estimated multiplier

associated with his/her estimated rank in the quiz, your partner's multiplier determined by his/her rank in the quiz, and the cost per click.

In **periods 9 to 16**, your multiplier, your catches, your partner's multiplier, and your partner's catches determine **your earnings** in tokens as follows:

your earnings = (common pot)/2 – your expense.

That is, in **periods 9 to 16** your earnings are equal to half of the "**common pot**" minus **your expense**. Your expense is equal to the cost per click of 50 tokens multiplied by your number of clicks for the period.

Similarly, in **periods 9 to 16**, your partner's earnings in tokens are determined as follows:

your partner's earnings = (common pot)/2 – your partner's expense.

That is, in **periods 9 to 16**, your partner's earnings are equal to half of the "**common pot**" minus **your partner's expense**. Your partner's expense is equal the cost per click of 50 tokens multiplied by your partner's number of clicks for the period.

In **periods 9 to 16**, the **common pot** is:

common pot = **(your multiplier x your catches)**
+ (your partner's multiplier x your partner's catches)
+ (5 x your catches x your partner's catches).

That is, in **periods 9 to 16**, the **common pot** is the sum of three components: **your multiplier times your catches** (**first component**), plus **your partner's multiplier times your partner's catches** (**second component**), plus **5 times your catches times your partner's catches** (**third component**).

At the end of each period from 9 to 16, you will see on your computer screen how many balls you caught, your clicks, and your earnings for that particular period.

Please note that catching more balls by moving the tray more often does not necessarily lead to higher earnings in this part of the experiment. This is because both **your pot** or **common pot** and **your expense** matter for **your earnings**.

Recall that your earnings in tokens will be converted into Swiss Francs at the rate of 300 tokens to CHF 1. The example that follows illustrates how your earnings are computed in **periods 9 to 16**.

Example: Suppose that, amongst periods 9 to 16, the one that counts for payment is 11. Imagine your multiplier is 120, you caught 20 balls, and you clicked 15 times. Imagine also your partner's multiplier is 160, she caught 25 balls, and she clicked 30 times. Then, we have:

first component of the common pot = 120 x 20 = 2400

second component of the common pot = 160 x 25 = 4000

third component of the common pot = 5 x 20 x 25 = 2500

common pot = 2400 + 4000 + 2500 = 8900

your expense = (50 x 15) = 750

your earnings = 8900/2 – 750 = 4450 - 750 = 3700

your partner's earnings = 8900/2 – (50 x 30) = 4450 - 1500 = 2950

Your earnings at the ball-catching task will be determined by only one period from 1 to 16. The period that counts to determine your earnings will be randomly generated by the computer and each period is equally likely to be selected.

This is the end of the instructions of this part of the experiment. Do you have any questions? If you have questions, please raise your hand.

Fourth Part:

Option to make another estimate

In this part of the experiment, we will ask you if you would like to make another estimate of your rank in the quiz. If your answer is "**no**," then the first estimate is the one that counts for payment. If your answer is "**yes**," then you have to provide a **second estimate** of your rank in the quiz.

The payment for your second estimate is determined in the same way as was the payment for the first estimate. That is, the more your second estimate of your rank is precise, the more likely it is that you will earn **600 tokens**. The precise way your earnings are determined is the same as the one described in the instructions of the second part of the experiment.

If you provide a second estimate, then the estimate that counts for payment will be randomly generated by the computer and each of the two estimates (the first one and the second) is equally likely to be selected.

This is the end of the instructions of this part of the experiment. Do you have any questions? If you have questions, please raise your hand.

Fifth Part:

Make distributional decisions

In this part of the experiment, you will make 10 decisions that concern you and another participant from your group, excluding your partner at the ball-catching task. The other person will be randomly paired with you. You will never learn who this person is, and the other person will also not learn of your identity.

In each of the 10 decisions situations, you have exactly two options, an option LEFT and an option RIGHT. Each option involves a monetary amount for the "Decider" and a monetary amount for the "Receiver." The 10 decisions situations will be presented successively on two computer screens with 5 decision situations in each.

The 5 decisions situations on the first computer screen will be:

Dec. Nr.	**LEFT**		**Your Choice**	**RIGHT**	
	Decider earns	**Receiver Earns**		**Decider earns**	**Receiver earns**
1	**360 tokens**	**585 tokens**	LEFT ◯ ◯RIGHT	**450 tokens**	**450 tokens**
2	**405 tokens**	**585 tokens**	LEFT ◯ ◯RIGHT	**450 tokens**	**450 tokens**
3	**450 tokens**	**585 tokens**	LEFT ◯ ◯RIGHT	**450 tokens**	**450 tokens**
4	**495tokens**	**585 tokens**	LEFT ◯ ◯RIGHT	**450 tokens**	**450 tokens**
5	**540 tokens**	**585tokens**	LEFT ◯ ◯RIGHT	**450 tokens**	**450 tokens**

The first column displays the number of the decision situation. The second column, the payments to Decider and Receiver when the Decider chooses LEFT. The third column is where you make your choice. You click in option "LEFT" if you wish the Decider and the Receiver to receive the payments associated with LEFT. You click in option "RIGHT" if you wish the Decider and the Receiver to receive the payments associated with RIGHT The fourth column displays the payments to Decider and Receiver when the Decider chooses RIGHT.

The 5 decisions situations on the second computer screen will be:

Dec. Nr.	**LEFT**		**Your Choice**	**RIGHT**	
	Decider earns	**Receiver earns**		**Decider earns**	**Receiver earns**
6	**360 tokens**	**315 tokens**	LEFT ◯ ◯RIGHT	**450 tokens**	**450 tokens**
7	**405 tokens**	**315 tokens**	LEFT ◯ ◯RIGHT	**450 tokens**	**450 tokens**
8	**450 tokens**	**315 tokens**	LEFT ◯ ◯RIGHT	**450 tokens**	**450 tokens**
9	**495 tokens**	**315tokens**	LEFT ◯ ◯RIGHT	**450 tokens**	**450 tokens**
10	**540 tokens**	**315 tokens**	LEFT ◯ ◯RIGHT	**450 tokens**	**450 tokens**

When the experiment is over, the computer will randomly choose one of the 10 decision situations to determine the payments for this part. The computer will also randomly choose whether you are the Decider or the Receiver. That is, the computer will randomly choose if the option you have chosen in that decision situation is implemented, so that you will be the Decider or, on the other hand,

if the option your matched participant has chosen in that particular decision situation is implemented, so that you will be the Receiver. It is equally likely the computer assigns you to the role of Decider or of Receiver.

In the case the computer assigns your option to be implemented you will receive the number of tokens corresponding to Decider in the chosen decision situation and your matched participant will receive the number of tokens corresponding to Receiver in that same decision situation.

For example, if the chosen decision situation was the 10^{th}, the computer determined that your option is the one to be implemented, and you had chosen "LEFT", you would obtain 540 tokens while your matched participant would obtain 315 tokens.

If, on the other hand, if the chosen decision situation was the 10^{th}, the computer determined that the option chosen by your matched participant is the one to be implemented, and your matched participant had chosen "RIGHT", then you would obtain 450 tokens while your matched participant would obtain 450 tokens.

Notice that the numbers in the example are just for illustrative purposes. They DO NOT intend to suggest how anyone may choose among the different options.

Please notice that, once all participants have made their choices, chance alone determines whether your role will be Decider or Receiver. Thus, the option you choose will only be considered if chance finally determines that for a decision situation it is your option the one being implemented. In case in the chosen decision situation your choice is not the one being implemented; your choice is simply not considered.

Therefore, in case your choice is not being implemented, your choice can affect in no way neither your payment nor the payments of any other participant.

At no time any participant will know the option chosen by their matched participant.

This is the end of the instructions of this part of the experiment. Do you have any questions? If you have questions, please raise your hand.

Sixth Part:

Make one risky decision

On the screen of your computer, you will see a square in which you can find 100 boxes.

You will earn 5 tokens for each box you will decide to collect. The collection process of boxes is automatic: each second, a collected box changes its color. The collected boxes change color beginning from the left top of the screen and updated accordingly.

Behind one of those 100 boxes is hidden "a bomb" that may destroy all the boxes that have been collected.

The "bomb" can be in either box with equal probability (the probability that a "bomb" is in a particular box is equal to 1/100). **Nevertheless, you do not know behind which box the "bomb" is located.**

Your task for this part is to choose when to stop the collection process of boxes. You can do it by clicking on the button "STOP" whenever you wish.

If you collect the box containing the "bomb," the "bomb" will "explode" and you will not earn any tokens. If you stop the collection process of boxes before collecting the box containing the "bomb," the "bomb" will not explode and you will earn the tokens that have been accumulated so far.

Notice that you will know whether one of the boxes you collected contains the "bomb" only at the very end of the task. If you collect the box containing the "bomb," the "bomb" will explode only at the end of the task: this means that you may collect the box containing the "bomb" without knowing it.

We will begin this step by a training period. The goal of this training period is to show how this task works. Once the training period is finished, the task begins. The training period is only an example: you will not earn any tokens from the training period.

This is the end of the instructions of this part of the experiment. Do you have any questions? If you have questions, please raise your hand.

Seventh Part:

Complete a questionnaire

In this last part of the experiment, we ask you to complete a questionnaire. After completing your questionnaire, you will have to wait for everyone to complete theirs. After that you will be paid.

Your final payment is the addition of your earnings in each part of the experiment and of your show-up fee. We will print a page with your payments and hand it to you. You must take it with you outside the LABEX where a study administrator you use it to give you your final payment.

Please take note once again that 300 tokens in the experiment correspond to 1 CHF. If you have questions, please raise your hand.

Control questions: [not part of the experimental instructions]

Please answer the questions that will appear on your computer screen. The objective is to have complete clarity about the rules in the experiment. When you are done, click okay to proceed to the next screen. The computer will check if the control questions are answered correctly. If they are answered incorrectly you need to try again. Only after all participants in your group have answered these questions correctly can the experiment proceed.

1. Suppose you are ranked on the 7^{th} position, what is your multiplier?

Answer: _____ [120]

2. Suppose you are ranked on the 11^{th} position, what is your multiplier?

Answer: _____ [40]

Suppose that the period that counts for payment is period number 9. Suppose your multiplier is 160, you caught 40 balls, and you clicked 30 times. Suppose also your partner's multiplier is 80, she caught 30 balls, and she clicked 20 times.

3. What is the value of the **first component** of the common pot?

Answer: _____ tokens [6400=160*40]

4. What is the value of the **second component** of the common pot?

Answer: _____ tokens [2400=80*30]

5. What is the value of the **third component** of the common pot?

Answer: _____ tokens [6000=5*40*30]

6. What is the value of the **common pot**?

Answer: _____ tokens [14800=6400+2400+6000]

7. What is the value of half of the **common pot**?

Answer: _____ tokens [14800/2=7400]

8. What is the value of **your expense**?

Answer: _____ tokens [1500=50*30]

9. What is the value of **your earnings**?

Answer: _____ tokens [5900=7400-1500]

10. What is the value of **your partner's earnings**?

Answer: _____ tokens [6400=7400-50*20]