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Visual Continuous Time Preferences: Field Experiment in Honduras*

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Abstract

Visual Continuous Time Preferences (VCTP) is a novel tool for measuring time preferences that synthesizes the simplicity of Multiple Price List (MPL) and the precision of Convex Time Budget (CTB) tasks. We evaluate this tool in the field, in rural Honduras, to test whether running the task with enumerators and reducing the number of decisions improves the quality of results. We partially replicate results of the laboratory experiment since subjects answer the task rapidly and consistently, but they make little use of the additional precision. Enumerators are crucial for maintaining sample size and reducing the number of balls is not an improvement because it decreases the precision of answers. Results therefore suggest that the visual methodology has the potential to measure economic preferences among populations from lower socioeconomic backgrounds by making the salient aspects of the reasoning more accessible.

Keywords: Time Preference; MPL; CTB; Visual Experiment; Field Experiment.
JEL codes: C91, C93, D15.

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1. Introduction

Humans commonly make decisions implicating inter-temporal outcomes. From daily consumption and savings to buying a house or raising a family, time preferences are at the core of decision-making, with the recent study by Falk et al. (2018) showing substantial heterogeneity in time preferences and a direct impact on important life outcomes. These findings were consistent with the economic literature showing that patient individuals have better life outcomes, such as higher educational level (Duckworth and Seligman, 2005; Kirby et al., 2005; Golsteyn et al., 2014; Non and Tempelaar, 2016; Angerer et al., 2023), more responsible financial decisions (Ashraf et al., 2006; Tanaka et al., 2010; Meier and Sprenger, 2010, 2013; Epper et al., 2020) and better health conditions (Ashraf et al., 2006; Tanaka et al., 2010; Meier and Sprenger, 2010, 2013; Epper et al., 2020). Understanding the formation of time preferences and estimating them is therefore of great importance for both economists and policymakers.

Recent investigations on the formation of these preferences and how they are shaped throughout the life cycle identified genetic variations (Zyphur et al., 2009; Cesarini et al., 2009), cultural transmission from parents to offspring (Bisin and Verdier, 2000; Samek et al., 2021; Stoklosa et al., 2018; Brañas Garza et al., 2023), and maturation during the scholastic phase of childhood and adolescence at school (Brocas and Carrillo, 2020a,b, 2022; Sutter et al., 2018). These findings raise the question of whether such preferences can be shaped during these periods of life, and interventions in schools have demonstrated that this is indeed the case, with financial education increasing financial knowledge, savings, and time consistency in teenagers (Bruhn et al., 2013; Lührmann et al., 2018; Alan and Ertac, 2018; Sutter et al., 2023).

An important question arising from previous findings is whether time preferences, once formed, remain stable over time and whether they are consistently applied across different decision-making domains. The economic literature suggests that patience is a domain-general characteristic because of its stability over time (Meier and Sprenger, 2015) and the similarity of impatience level between primary and monetary rewards (Reuben et al., 2010; McClure et al., 2004, 2007). A potential explanation of these phenomenons is the positive correlation between patience and cognitive abilities observed in several studies (Frederick, 2005; Burks et al., 2009; Dohmen et al., 2010; Bosch-Domènech et al., 2014; Alfonso Costillo et al., 2024) suggesting that patience is a consequence of the general intelligence of an individual. We conclude that patience is likely shaped by genetic and environmental factors during the early years of life and remains stable over time and across various domains as a reflection of an the overall intelligence of an individual. This suggests that a tool capable of rapidly and accurately measuring time preferences across diverse populations would be valuable for the literature.

This paper aims to validate the Visual Continuous Time Preferences task (VCTP), introduced by Prissé (2023), in the field and to give some guidance on how to implement this task in this setting. Additionally, it compares its results with those of other tasks designed to measure time preferences. The VCTP synthesizes the strengths of two methods commonly used in the literature: the Multiple Price List (MPL) of Coller and Williams (1999) and the Convex Time Budget (CTB) of Andreoni and Sprenger (2012). From the MPL, it adopts a short completion time and high consistency of responses, while from the CTB, it takes the precision in measurement. It does so by addressing the same limitation in both tasks: a focus on the logical evaluation of numerical monetary amounts while neglecting the visual aspect of decision-making, whereas the human experience is dominated by the sense of sight. Thus, the contribution of VCTP is to introduce *visualization* in the experimental design and demonstrate its potential to measure meaningful economic preferences while combining the strong points of different mechanisms. This paper tests the advantages of the VCTP in the field with a low-educated population to determine its applicability in other settings.

The VCTP task measures time preferences by giving ten coins to subjects and asking them to answer six

scenarios in which they choose how much coins they want to allocate at the early period for 1 Euro and how much coins they want to allocate at the later period for 1 Euro plus an interest rate for waiting. The early period corresponds to a delay of 1 day (to avoid present bias) and the later period corresponds to a delay of 8 days. The six scenarios present participants with progressively increasing interest rates of 0%, 20%, 40%, 60%, 80% and 100%, which respectively corresponds to 10, 12, 14, 16, 18 and 20 Euros if the subject chooses to allocate all his coins in the later period. The use of high interest rates is intended to maximize the range of possible choices, thereby increasing the likelihood that subjects will use interior solutions. Subjects choose for each coin separately thanks to the introduction of visualization inside the experimental design: the amount in the early period is represented by 10 solid circles each corresponding to 1 Euro. The amount in the later period is represented by 10 dotted circles around the solid circles with a diameter proportional to the interest rate from waiting. A dotted cross inside each dotted circle allows subjects to indicate their choice by coloring the cross in blue if they want the money in the early period and in red if they want the money in the later period. Although red is sometimes interpreted as a signal to stop or be careful, we felt that this colour could instead increase participants' attention to their decision without necessarily implying a normative preference. Furthermore, two-coloured pencils (red and blue) are commonly used in educational contexts and are often the only coloured pencils available on the market, making them familiar and neutral to participants.

The VCTP is probably best described and understood as an MPL within the MPL. Choosing between 10 Euros in the early period and the maximum amounts of 10, 12, 14, 16, 18, and 20 Euros in the later period constitutes the first layer of MPL, which corresponds to the original MPL mechanism. Choosing how to allocate each coin differently between the early and late periods in each decision forms the second layer of MPL, which resembles an implicit 11-choices MPL. This mechanism is similar to the iterative MPL of Andersen et al. (2006), except that visualization enables the iterative MPL to be seamlessly applied across all periods, allowing us to study how the preferences of subjects change from the early to the late period. Therefore, it is probably more appropriate to describe the mechanism of the second layer as a combination of the CTB mechanism and visualization, as tokens from the CTB mechanism are now visually represented to subjects. Although it comes at the cost of reducing the number of tokens and therefore precision, it makes realistic sense because humans simplify monetary calculations by minimizing the amount of physical money they need to manipulate with coins of different sizes and colors.

Results from the laboratory experiment indicated that subjects completed the task rapidly in 400.98 seconds (6.68 minutes) with a high consistency of 90.07%. The task precisely identifies the time preferences of subjects because they make meaningful use of the additional precision provided by the opportunity to differentially allocate between early and late periods. These results called for further investigations of the usefulness of the *visualization* method. Indeed, lab subjects were students of the University of Sevilla and therefore Western European with favorable socioeconomic conditions. They were therefore an ideal pool of subjects. However, the interest of visualization is to provide an intuitive language that can be understood by any human being. We were therefore interested to validate VCTP with a pool of subjects that would be the opposite of the previous one, meaning subjects with low economic status and little access to intellectual resources during their life, in order to validate the universality of VCTP through visualization.

VCTP is not the first task using visualization in the economic literature. The field literature already used visual tools to address the complexity of the CTB task and make it more accessible to their subjects. Aycinena and Rentschler (2018); Aycinena et al. (2019, 2022) replaced the mechanism of allocating tokens to obtain precise monetary payoffs by asking subjects to choose between proposed monetary amounts illustrated with local coins and banknotes. Giné et al. (2018) replaced the mechanism of allocating tokens by instructing subjects to allocate beans into two bowls, with one bowl representing the early period and the other representing the later period. Balakrishnan et al. (2020) asked subjects to indicate their choice by moving the cursor of a slider on a touchscreen interface. The slider bar also uses a color gradient to symbolize the proportion of

money allocated to each period. All of these previous papers essentially used visual shortcuts to reduce the cognitive load on subjects. The first paper to use a fully visual design was Angerer et al. (2015) to adapt MPL and CTB to children. In MPL, interest rates were represented by colors and payoffs with coins. In CTB, subjects were physically given five tokens and asked to draw them inside boxes representing present and future periods. Both measures were able to elicit similar results, suggesting the methodological pertinence of visual experiment with children and calling for testing its validity with adult populations.

Between Prissé (2023) validation of visual experiments with lab subjects and Angerer et al. (2015) validation of visual experiments with children, there was a gap in the literature regarding the validation of visual experiments with a population exhibiting characteristics between these two groups. The purpose of this paper is to precisely address this gap by validating the VCTP task in the field. We achieve this by creating a new version of the VCTP task that helps subjects understand the concept of interest rates using piggybanks. Additionally, we test whether providing subjects with enumerators or simplifying the task design with 5-coins can improve the quality of results. We partially replicate the results of the lab experiments, observing that participants require more time to answer, exhibit less consistency, and make limited use of the additional precision. Furthermore, simplifying the task to 5-coin leads to a loss of precision, whereas providing subjects with enumerators enhances the quality of results. We interpret these findings as suggesting that visual experiments may require further adaptations to be effective with more challenging populations, but they still hold promise.

The rest of the paper is organized as follows: Section 2 presents the experimental design, outlines the questions to be addressed, describes the measurements of interest, and explains the implementation of the experiment. Section 3 outlines the econometric approach used to analyze the data. Section 4 examines the reasons for attrition and assesses whether the sample is balanced between conditions. Section 5 presents the results of the experiment. Finally, Section 6 provides the conclusion.

2. Experimental Protocol

2.1. Recruitment and implementation

The experiment was carried out in Santa Rosa de Copán (Honduras) from May 1 to 14, 2019, in the districts of Osorio, El Carmen, Prado Alto, and Santa Teresa. The data was collected by a local NGO, named PILARH. The sample was selected according to the eligibility criterion of having at least one child between 6 and 9 years old[1]. We selected households with these characteristics as this experiment was used to replicate the elicitation of time and risk preferences for a large-scale impact evaluation project for the World Bank.

The experiment was conducted by 12 field enumerators trained in a three-day workshop. Using enumerators implied that subjects did not self-manage the instructions, that is, they were read and explained by the enumerator. All the enumerators (1 man and 11 women) were over 20 years old and had university studies. They received a list of households they had to visit, and the type of paper-based questionnaire they had to apply to each household. The authors conducted the random allocation of treatments before the visit and the interviewers did not have any influence on such selection. To ensure the enumerators were applying the corresponding questionnaire to the households, a field coordinator supervised the correct use of the lists created by the researchers.

[1]This eligibility criterion led us to obtain a very high proportion of females (89.2%) among our participants, as women are more likely to be the primary caregivers in households with lower economic resources and young children.

The experiment consisted of four tasks: coordination game, expectations, time discounting, and risk preferences. The TD task was always performed in third place. The experiment was pre-registered[2] and approved by the Ethics Committee of Universidad Loyola Andalucía on 28 April 2019. A sample of $n = 360$ subjects participated in the experiment and $n = 329$ subjects completed the task. All participants signed an informed consent form and received a show-up fee of 25 lempiras. They were also paid real money based on their decisions in each task. For the VCTP task they earned between 50 and 100 lempiras (L100 $\equiv$ \$4.1), with the largest amount roughly corresponding to half a day of work. To determine payments, we randomly selected one decision to be paid, a mechanism that was explained to participants beforehand. Payments were disbursed by the NGO conducting the data collection, with the amount corresponding to the randomly selected decision paid on the designated date.

2.2. *Experimental tasks*

We use the experimental designed by Prissé (2023), with the subjects making a total of 6 decisions for the interest rates 0%, 20%, 40%, 60%, 80% and 100%. Figure A1 in the Appendix illustrates one decision of the original task for an interest rate of 60%. We tailored the task to the context of rural inhabitants in developing countries, who may face challenges in understanding the mechanism. We therefore facilitated the understanding of the task for these subjects by maintaining the presentation of interest rates in increasing order and replacing the indication of the interest rate with a direct display of the maximum amounts of money in both the early and late periods. We also indicated the value of each coin in the early and late periods through a clear and concise sentence conveying this information, whereas the original design only presented the numerical value. Finally, we removed the dotted circles that previously indicated the additional amount of money associated with the interest rate in the future and replaced them with piggy banks filled up to the value of the interest rate. The solid circles with dotted crosses are the only part of the task that is identical to the original one. We chose to use symbols to represent monetary amounts, rather than images of local currency, to enhance the generalizability of our results. Figure 1 displays the experimental task for a 60% interest rate and Figure 2 displays the piggybanks associated with each interest rate. It should be noted that subjects answered the task on paper and that we chose to not include a practical example to assess whether participants could complete the task consistently without a training period. The complete experimental instructions and tasks can be found in the Appendix B.

Similarly as the original paper, we aimed to compare the MPL mechanism adapted to our experimental design with the VCTP task, which corresponds to a CTB mechanism. Subjects answered both the MPL and the VCTP tasks, with half of the subjects answering the MPL first and half of the subjects answering the VCTP first. We remind that subjects are allowed to allocate coins in the early and late periods in each task according to the following rules:

- MPL: subjects are forced to allocate all the coins either to the present or to the future.
- VCTP: subjects are allowed to allocate each coin to the present or to the future.

It therefore means that the difference between each treatment is *allowing subjects to make interior solutions*. The MPL treatment allows us to investigate the robustness of the task to populations of developing countries, who may require more time to respond and exhibit less consistency. The VCTP treatment allows us to investigate whether subjects use the additional precision of interior solutions, an aspect we anticipate to be less

[2] https://aspredicted.org/dx52q.pdf

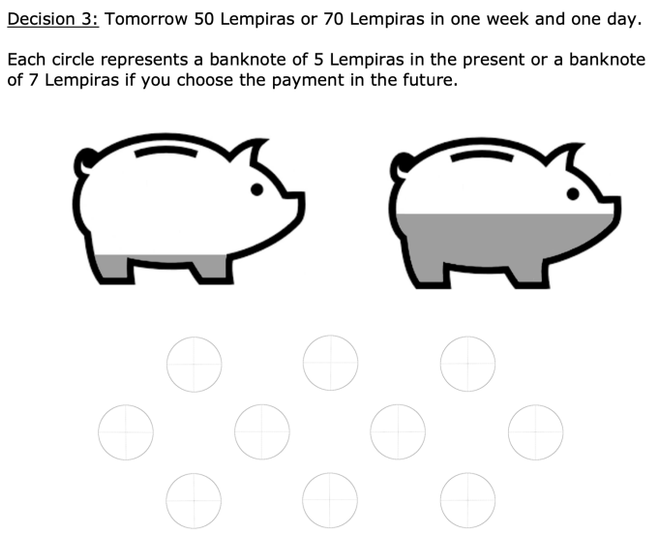


Figure 1: Example of experimental design for 60% interest rate

prominent among these subjects and that could lead to lower consistency.

We take opportunity of being in the field to answer two additional questions. The first is whether simplifying the experimental design with five coins is an improvement, since it should decrease the response time but could also decrease the quality of results by diminishing precision. We therefore have half of subjects answering the 5-coins version of the task and half of subjects answering the 10-coins version of the task. The only difference between the two conditions is that the 5-coins version of the task display the coins in a single horizontal line. Figure A2 in Appendix displays an example of experimental design for the five coins task with 60% interest rate. We therefore have two treatments related to the number of coins:

- 5-coin: subjects answer the 5 coins version of the task.
- 10-coin: subjects answer the 10 coins version of the task.

The second question we aim to answer is whether helping subjects with enumerators influence the answers of subjects. Indeed, enumerators are widely used in the field and might bias the results by changing the preferences of subjects. It also allows us to investigate whether the universal language of visualization allows subjects to answer the task in autonomy because time and consistency are sufficiently satisfying without the help of enumerators. Subjects therefore answer the experiment according to two different mode of administration:

- Self-Administered: subjects answer the experiment without the help of an enumerator.
- Externally-Administered: subjects answer the experiment with the help of an enumerator.

We therefore have a 2x2x2 design resulting in the following 8 experimental conditions in our study:

- (i) MPL - 5-coin - Self-Administered.

Figure 2: Piggy bank visualization by increasing interest rate

- (ii) MPL - 5-coin - Externally-Administered.
- (iii) MPL - 10-coin - Self-Administered.
- (iv) MPL - 10-coin - Externally-Administered.
- (v) VCTP - 5-coin - Self-Administered.
- (vi) VCTP - 5-coin - Externally-Administered.
- (vii) VCTP - 10-coin - Self-Administered.
- (viii) VCTP - 10-coin - Externally-Administered.

We use the same four basic measurements than the original study to measure the effect of how subjects are allowed to allocate coins to the future, the number of coins and the administration mode:

(i) *Time* ($Time$) is the number of seconds subjects take to complete the task. It is defined as the time interval between starting to answer the first scenario and completing the last one. It therefore includes both the time needed to reflect on the answer and the time needed to indicate the answer.

(ii) *Consistency* ($Cons$) identifies subjects who correctly perform the task. Subjects are consistent if their number of future choices always remains the same or increases when the interest rate increases. This criterion is harder to satisfy in VCTP because allocating X coins in the future at one interest rate means that you should also allocate at least these X coins in the future when their value increases.

(iii) *Allocations to the future* ($NumFut$) refers to the total number of coins allocated to the future in all decision tasks. Subjects indicate their budget choices by allocating X coins to the future, with $X \in \{0, 10\}$ in MPL and $X \in \{0, 1, 2, ..., 10\}$ in VCTP. We doubled the allocations of subjects answering the 5-coin version of the task to make results more easily interpretable.

(iv) *Number of allocations to interior solutions* ($NumInt$) refers to the total number of coins allocated to the future by using interior solutions of VCTP, that is, the sum of allocations in which $X \in \{1, 2, ..., 9\}$.

A sample of $n = 360$ subjects participated in the experiment and $n = 329$ subjects completed the task. The distribution of subjects by treatment according to administration mode and number of coins was, with 5 (10) referring to the number of coins and S (E) to the management type: $n_{5,S} = 69$ in the Self-Administered 5-coins task, $n_{10,S} = 77$ in the Self-Administered 10-coins task, $n_{5,E} = 91$ in the Externally-Administered 5-coins task and $n_{10,E} = 92$ in the Externally-Administered 10-coins task.[3]

[3]The precise numbers were $n_{5,S} = 35$, $n_{10,S} = 33$, $n_{5,E} = 47$, $n_{10,E} = 42$ for the MPL task first and $n_{5,S} = 34$, $n_{10,S} = 44$, $n_{5,E} = 44$, $n_{10,E} = 50$ for the VCTP task first.

3. Econometric Approach

Throughout our analysis, we estimate the following simple linear regression model to identify the causal effects of the VCTP mechanism, the use of enumerators and the number of coins on different outcome variables:

$$y_i = \beta_0 + \gamma_e * X_{ie} + \gamma_r * X_{ir} + \gamma_c * X_{ic} + \epsilon_i \tag{1}$$

Where y_i is the outcome variable for each individual; X_{ie} is the vector of the explanatory variables; X_{ir} is the vector of the interaction variables; X_{ic} is the vector of the control variables and ϵ_i is the error term.

The outcome variable y_i refers to the four measurements of Section 2: *Time* is the response time in seconds that subjects need to answer the task; *Cons* is a dummy variable taking value 1 if subjects are consistent in the task and 0 otherwise; *NumFut* is the total amount of coins allocated to the future in the task and *NumInt* is the frequency of the use of interior solutions in the task by subjects[4].

The set of explanatory variables includes three main variables. The first is the dummy variable *VCTP*, which takes a value of 1 when participants are assigned to the VCTP mechanism and 0 when assigned to the MPL mechanism. The second is the dummy variable *SelfManaged*, which takes a value of 0 when participants are self-managed and 1 when they are externally managed, indicating that they receive assistance from an enumerator. The third is the dummy variable *FiveCoins*, which takes a value of 1 when participants perform the 5-coin version of the experiment and 0 when they perform the standard 10-coin version. Additionally, we will include the dummy variable *InstructionsClear* as an explanatory variable in supplementary analyses, which takes a value of 1 when participants find the instructions clear and 0 otherwise, and the dummy variable *UseInterior*, which takes a value of 1 when participants use interior solutions and 0 otherwise.

The set of interaction variables refers to the interaction terms between explanatory variables. We use *VCTP* × *SelfAdmin* identifying the effect of answering the VCTP task when being self-managed and *VCTP*×*FiveCoins* identifying the effect of answering the VCTP task when using the 5-coin version of the task. We do not include *SelfAdmin*×*FiveCoins* because we believe that the effect would be too small to be identified if it exists[5]. Additionally, in our additional analysis, we will use the interaction term *VCTP*×*InstructionsClear* to identify the effect of answering the VCTP task when finding the instructions clear. We will also employ in supplementary analysis the interaction terms *UseInterior*×*SelfAdmin* to identify the effect of using interior solutions when being self-administered and *UseInterior*×*FiveCoins* to identify the effect of using interior solutions when answering the 5-coin task.

The set of control variables refers to the two control variables, which are the age of subjects in years and the gender of subjects, a dummy variable taking value 1 when subjects are female and 0 otherwise.

It should be noted that we do not include interaction terms when testing whether VCTP affects the use of interior solutions (model 7 and 8) because subjects are not supposed to use interior solutions in MPL. However, it is worth noting that 9 out of 329 subjects (2.7%) still did so. Finally, we only take into account the first task answered by subjects in the analysis and therefore have a between-subjects design.

[4]This paper does not aim to estimate participants' time preferences. Meaningful estimation of time preferences requires a wider range of early and late periods and more realistic interest rates than those used here. Consequently, we believe that this version of the VCTP is unsuitable for estimating time preferences and have therefore chosen to refrain from attempting this analysis.

[5]Regressions including this interaction term confirmed this intuition

Table 1: *Balance check by task*

$Overall$	n	$mean_M$	$mean_V$	$M-V$	$p-value$	$adj.p-value$
Age	329	33.32	34.10	-0.78	0.420	0.433
Female	329	0.892	0.843	0.049	0.196	0.386
$FiveCoins\ SelfAdmin$	n	$mean_M$	$mean_V$	$M-V$	$p-value$	$adj.p-value$
Age	69	32.60	35.24	-2.64	0.267	0.282
Female	69	0.943	0.735	0.208	0.018	0.039
$FiveCoins\ ExtAdmin$	n	$mean_M$	$mean_V$	$M-V$	$p-value$	$adj.p-value$
Age	91	32.32	34.14	-1.82	0.267	0.472
Female	91	0.915	0.886	0.029	0.653	0.669
$TenCoins\ SelfAdmin$	n	$mean_M$	$mean_V$	$M-V$	$p-value$	$adj.p-value$
Age	77	34.79	33.52	1.27	0.525	0.773
Female	77	0.879	0.886	-0.007	0.920	0.920
$TenCoins\ ExtAdmin$	n	$mean_M$	$mean_V$	$M-V$	$p-value$	$adj.p-value$
Age	92	33.90	33.80	0.1	0.955	0.991
Female	92	0.833	0.840	-0.007	0.932	0.991

4. Attrition and Questionnaires

We start by examining attrition in our experiment to understand why 31 subjects did not complete the task. In the self-administered condition, 13 subjects could not read and thus required the assistance of an enumerator to complete the experiment. We have five additional subjects who declined to answer the task, with two of them in the self-administered group and three of them in the externally-administered group. We lost 9 additional subjects in the self-administered condition because they did not mark all the coins when answering the task. Finally, we lost 4 additional observations in the self-administered condition due to a scanner error. We conclude that in the self-administered condition, we lost 7.47% of the 174 subjects due to illiteracy and an additional 5.14% due to errors when answering the task. These findings underscore the significant role of enumerators in preserving sample size.

We now assess the balance in control variables between the MPL and VCTP groups through a difference of means test to validate the meaningfulness of the comparison. We also conduct the same analysis for each combination of the number of coins and administration mode to assess the meaningfulness of comparing MPL and VCTP conditions within these combinations. Table 1 presents the results of these tests, including Romano-Wolf adjusted p-values for multiple testing in the last column. We observe that the only distinction between conditions is a 20.8% higher proportion of female subjects in MPL compared to VCTP when using the 5-coin version of the task with external administration ($p = 0.039$), otherwise we see that the MPL and VCTP populations exhibit similar characteristics (p $\geq$ 0.282). Additional analysis in Section A.2 show the same results for the number of coins (Table A1) and the administration mode (Table A2). We therefore conclude that our sample allows us to estimate the causal effects of the VCTP treatment, administration mode and number of coins on the outcomes.

5. Results

Table 2 presents a summary of the variables in our analysis, comparing the MPL and VCTP tasks, irrespective of the number of coins and management type. The mean response time for subjects was 217.57 seconds for

Table 2: *Summary statistics for the main variables used in our analysis by task*

Variable	*Definition*	n	*Mean*	*Std.Dev*	*Min*	*Med*	*Max*
TimeMPL	Response time in the MPL task (in seconds)	138	217.57	112.07	81	190.5	598
TimeVCTP	Response time in the VCTP task (in seconds)	152	235.70	110.79	69	210.5	592
ConsMPL	Consistency of subjects in the MPL task	157	0.885	0.320	0	1	1
ConsVCTP	Consistency of subjects in the VCTP task	172	0.715	0.453	0	1	1
NumFutMPL	Number of future allocations in the MPL task	157	40.07	19.37	0	50	60
NumFutVCTP	Number of future allocations in the VCTP task	172	38.83	17.25	0	40	60
NumInt	Number of interior solutions used in the VCTP task	172	4.58	9.24	0	0	40
Age	Age of subjects (in years)	329	33.73	8.67	22	32	70
Female	Gender of subjects (1=female)	329	0.866	0.341	0	1	1

the MPL task and 235.70 seconds for the VCTP task, with a one-sided t-test marginally rejecting the equality between conditions ($p = 0.084$). We have 88.5% subjects consistent in the MPL task and 71.5% subjects consistent in the VCTP task, with a t-test rejecting the equality between conditions ($p < 0.001$). On average, subjects allocated 40.07 coins to the future in the MPL task and 38.83 coins in the VCTP task, with a t-test not rejecting the equality between tasks ($p = 0.538$). Additionally, subjects allocated an average of 4.58 coins to interior solutions, and a t-test showed a significant difference from zero ($p < 0.001$). It therefore seems that subjects indicate similar answers to the MPL and VCTP task, but they answer MPL slightly more rapidly. Additionally, the additional complexity of VCTP decreases consistency for little gain in precision. Section A.3.1 extends this analysis. Table A3 displays the same results by number of coins, showing that the 5-coin task reduces response time but also reduces the number of interior solutions and therefore decreases the precision of measurement. Table A4 displays the same results by administration mode, showing that enumerators decrease response time. Table A5 displays the results by task and number of coins, showing that subjects are less consistent in VCTP regardless of the number of coins of the task. Finally, Table A6 displays the results by task and administration mode, showing that self-administered subjects need more time and are less consistent with VCTP. We therefore conclude from this first look at the results that subjects might face difficulties with VCTP, that enumerators improve the quality of results and that the 5-coin task is perhaps not an improvement over the 10-coin task.

Table 3 displays the results of the linear regressions on measurements of interest. Regressions were performed on the variables of interest both without and with controls to estimate the effect of the explanatory variables VCTP task, number of coins, administration mode on these variables and the interaction terms between VCTP and others explanatory variables. We use OLS regressions on response time with robust standard errors in columns (1) and (2), probit regressions on consistency in columns (3) and (4), tobit regressions on the number of future allocations in columns (5) and (6) and on the number of interior solutions in columns (7) and (8). We do not use interactions terms in (7) and (8) because interior solutions should only be used with VCTP. Standard errors are reported in parentheses and p-values are shown in brackets. Adjusted R-squared is reported for regressions on response time and log-likelihood is reported for regressions on consistency, number of future allocations and number of interior solutions.

We see that $VCTP$ has no significant effects on response time, consistency or number of future allocations ($p \geq 0.409$). However, in column (3), the interaction term between VCTP and self-administration significantly estimates a strong negative effect ($p = 0.037$) that remains significant after adding controls ($p = 0.034$). Column (7) and (8) shows that subjects are using the additional precision of interior solutions ($p < 0.001$) and are, on average, allocating an estimated amount of 4.333 and 4.364 coins to interior solutions. Given the generally high interest rates employed in this experimental design, these amounts may be considered somewhat low, especially compared to laboratory subjects. A potential explanation is provided by the value of 0.402 for the constant in column (7), which suggests that subjects are employing a salient allocation

strategy, separating half of their allocation in the early period and half in the late period. Interestingly, we find that enumerators have no effect on response time and allocations to the future. Regarding the number of coins in the task, we see in column (1) that the 5-coin task marginally decreases response time ($p = 0.096$) and this result remain in column (2) after adding controls ($p = 0.092$), but it does not increase consistency in the task and it also marginally decreases the number of interior solutions in column (7) ($p = 0.065$), with this result remaining significant in column (8) after adding controls ($p = 0.063$). We notice that Age decreases the number of future allocations in column (6) ($p = 0.039$). We conclude that VCTP elicits similar results to MPL in the field in terms of response time, consistency and revealed time preferences. We also observe that subjects use the additional precision offered by VCTP and apparently face significant difficulties being consistent in the task without enumerators. These results suggest that *there is no clear advantage to using VCTP rather than MPL in the field*. Furthermore, we find indications that the 5-coin task is not an improvement over the 10-coin task because it reduces both response time and precision without increasing the consistency of subjects.

Table 3: *OLS, probit and tobit estimations of the impact of the VCTP mechanism, number of coins and administration mode on response time, consistency, allocations to the future and interior solutions.*

	(1) Time	(2) Time	(3) Cons	(4) Cons	(5) NumFut	(6) NumFut	(7) NumInt	(8) NumInt
$VCTP$	-1.916	-2.169	-0.220	-0.209	2.775	2.495	4.333***	4.364***
	(20.739)	(20.861)	(0.272)	(0.274)	(3.357)	(3.330)	(0.735)	(0.737)
	[0.926]	[0.917]	[0.419]	[0.445]	[0.409]	[0.454]	[¡0.001]	[¡0.001]
$SelfAdmin$	10.413	10.348	0.241	0.241	3.101	3.112	1.022	1.022
	(18.684)	(18.702)	(0.272)	(0.274)	(2.927)	(2.903)	(0.738)	(0.737)
	[0.578]	[0.580]	[0.376]	[0.380]	[0.290]	[0.285]	[0.167]	[0.167]
$FiveCoins$	-31.693*	-32.613*	0.177	0.215	2.498	1.802	-1.362*	-1.369*
	(18.957)	(19.278)	(0.264)	(0.267)	(2.903)	(2.892)	(0.735)	(0.734)
	[0.096]	[0.092]	[0.504]	[0.420]	[0.390]	[0.534]	[0.065]	[0.063]
VCTP×SelfAdmin	39.142	39.886	-0.711**	-0.727**	-4.999	-4.782		
	(26.386)	(26.368)	(0.341)	(0.343)	(4.039)	(4.010)		
	[0.139]	[0.131]	[0.037]	[0.034]	[0.217]	[0.234]		
VCTP×FiveCoins	5.820	7.315	-0.180	-0.234	-3.624	-2.553		
	(26.024)	(26.193)	(0.335)	(0.339)	(4.023)	(4.012)		
	[0.823]	[0.780]	[0.592]	[0.490]	[0.368]	[0.525]		
Age		-0.105		0.016		-0.239**		0.010
		(0.847)		(0.010)		(0.115)		(0.042)
		[0.901]		[0.115]		[0.039]		[0.818]
$Female$		11.353		-0.090		3.445		0.807
		(16.302)		(0.243)		(2.947)		(1.081)
		[0.487]		[0.712]		[0.243]		[0.456]
Constant	229.804***	223.63***	1.018***	0.562	37.422***	42.676***	0.402	-0.640
	(15.789)	(37.396)	(0.209)	(0.457)	(2.462)	(5.367)	(0.732)	(1.912)
	[0.000]	[0.000]	[0.000]	[0.219]	[0.000]	[0.000]	[0.583]	[0.738]
Estimation Method	OLS	OLS	Probit	Probit	Tobit	Tobit	Tobit	Tobit
Observations	290	290	329	329	329	329	329	329
Adj.R^2 // LL	0.033	0.027	-155.393	-153.987	-1420.836	-1417.858	-1089.810	-1089.516
Controls	No	Yes	No	Yes	No	Yes	No	Yes

Robust standard errors for OLS regressions. p-values in brackets. ***, ** and * denote significance at the 1%, 5% and 10% levels.

One limitation of the previous analysis is that we consider the task in its entirety, while each task decision can

have a different influence on the results. For instance, the time required to answer the first decision is likely to be greater than the time for the last decision; consistency may be more frequently compromised in the third or fourth decisions; the number of future allocations could be lower in the first decision and higher in the last decision; and the use of interior solutions may be more prevalent in the second decision. We therefore run the same analysis than before with round fixed-effect for consistency, number of future solutions and number of interior solutions. We only have the overall response time and therefore run fixed effect regressions for this variable. We also use logit regressions instead of probit regressions to estimate the effects of the independent variables on consistency, as fixed-effects probit regressions for panel data do not exist. Additionally, consistency in the first round is omitted from the analysis since subjects are necessarily consistent in the first decision. Table 4 displays the results of these regressions. We see that $VCTP$ has no effect on response time, consistency or number of future solutions, and that subjects make very little use of interior solutions. It therefore gives further evidence that VCTP is answered similarly than MPL. We will now turn our attention toward administration mode and number of coins, but not before remarking that age increases consistency ($p = 0.017$) and decreases the number of allocations to future ($p < 0.001$) while female are allocating more to the future ($p = 0.039$).

Regarding the administration mode, we see in column (3) that $SelfAdmin$ increases consistency in the task ($p < 0.001$) with this result remaining significant in column (4) after adding controls ($p < 0.001$). Self-administration also marginally increases the number of future solutions in column (5) ($p = 0.060$) and in column (6) after adding controls ($p = 0.058$). It also has a small effect on increasing the number of interior solutions in column (7) ($p = 0.007$) and in column (8) after adding controls ($p = 0.007$). Now considering the interaction term between VCTP and self-administration, we see a relatively large increase of around thirty-nine seconds of the response time in column (1) ($p < 0.001$) that remains significant after adding controls ($p < 0.001$). We also have a relatively large effect in decreasing consistency in column (3) ($p < 0.001$) and in column (4) after adding controls ($p < 0.001$). It also has a small and significant effect on reducing the number of future allocations in column (5) ($p = 0.028$) and in column (6) after adding controls ($p = 0.035$). We conclude that being self-administered generally increases consistency, except in the self-administered VCTP task, where it has a significant effect in decreasing consistency. We also see that self-administration in VCTP increases response time, decreases the number of future solutions and increases the number of interior solutions. We interpret these results as suggesting that field subjects struggle to handle the complexity of the VCTP task on their own, but they seem willing to understand and utilize it.

Regarding the number of coins, we see in column (1) that the 5-coin task has a large effect in decreasing response time ($p < 0.001$) with this effect remaining significant in column (2) after adding controls ($p < 0.001$). We also see in column (3) that the 5-coin task increases consistency ($p = 0.032$) with this result remaining significant in column (4) after adding controls ($p = 0.022$). Column (7) suggests that the 5-coin task has a small effect on reducing the number of interior solutions ($p < 0.001$) with this effect remaining significant in column (8) after adding controls ($p < 0.001$). Now looking at the interaction term between VCTP and the 5-coin task, we see in column (3) that it decreases consistency in the task ($p = 0.050$) with this effect remaining significant in column (4) after adding controls ($p = 0.029$). These results therefore confirm that the 5-coin version of the task reduces response time but also decreases the use of interior solutions and therefore precision of measurement. We additionally find that the 5-coin task increases consistency, except in VCTP in which it has the opposite effect of decreasing it. We therefore conclude that the 5-coin task is an improvement over the 10-coin task when experimenters use the MPL task, while the loss of information resulting from the removal of the additional precision of VCTP suggests that the 10-coin version of the task is strictly superior with a sample that utilizes interior solutions correctly.

In conclusion, our findings suggest that the responses of subjects in the VCTP task are similar to those in the MPL task. Hence, the additional complexity of the VCTP task appears unnecessary for field subjects,

Table 4: *OLS, probit and tobit estimations with fixed-effects of the impact of the VCTP mechanism, number of coins and administration mode on response time, consistency, allocations to the future and interior solutions.*

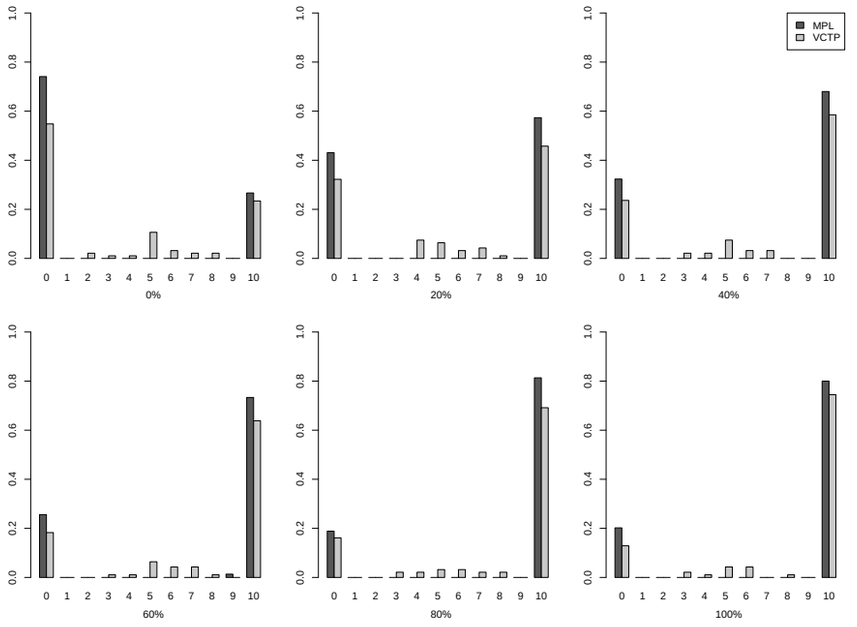
	(1) Time	(2) Time	(3) Cons	(4) Cons	(5) NumFut	(6) NumFut	(7) NumInt	(8) NumInt
$VCTP$	-1.916	-2.169	-0.107	-0.094	0.462	0.416	0.722***	0.727***
	(8.470)	(8.471)	(0.241)	(0.242)	(0.315)	(0.314)	(0.063)	(0.063)
	[0.821]	[0.798]	[0.656]	[0.699]	[0.142]	[0.185]	[0.000]	[0.000]
$SelfAdmin$	10.413	10.348	1.288***	1.286***	0.517*	0.519*	0.170***	0.170***
	(7.760)	(7.768)	(0.331)	(0.332)	(0.275)	(0.274)	(0.063)	(0.063)
	[0.180]	[0.183]	[0.000]	[0.000]	[0.060]	[0.058]	[0.007]	[0.007]
$FiveCoins$	-31.693***	-32.613***	0.585**	0.628**	0.416	0.300	-0.227***	-0.228***
	(7.577)	(7.609)	(0.272)	(0.273)	(0.273)	(0.273)	(0.063)	(0.063)
	[0.000]	[0.000]	[0.032]	[0.022]	[0.127]	[0.271]	[0.000]	[0.000]
VCTP×SelfAdmin	39.142***	39.886***	-2.133***	-2.152***	-0.833**	-0.797**		
	(10.709)	(10.730)	(0.372)	(0.373)	(0.379)	(0.378)		
	[0.000]	[0.000]	[0.000]	[0.000]	[0.028]	[0.035]		
VCTP×FiveCoins	5.820	7.315	-0.629**	-0.704**	-0.604	-0.425		
	(10.484)	(10.538)	(0.320)	(0.322)	(0.378)	(0.378)		
	[0.579]	[0.488]	[0.050]	[0.029]	[0.110]	[0.261]		
Age		-0.105		0.021**		-0.040***		0.002
		(0.302)		(0.009)		(0.011)		(0.004)
		[0.728]		[0.017]		[0.000]		[0.654]
$Female$		11.353		-0.205		0.574**		0.135
		(7.761)		(0.211)		(0.278)		(0.093)
		[0.144]		[0.332]		[0.039]		[0.147]
Constant	229.804***	223.630***			6.237***	7.113***	0.067	-0.107
	(6.269)	(14.222)			(0.764)	(0.886)	(0.063)	(0.164)
	[0.000]	[0.000]			[0.000]	[0.000]	[0.286]	[0.516]
Estimation Method	OLS	OLS	Logit	Logit	Tobit	Tobit	Tobit	Tobit
Fixed Effect // Round Fixed Effect	FE	FE	RFE	RFE	RFE	RFE	RFE	RFE
Number of Round	6	6	5	5	6	6	6	6
Observations	290	290	329	329	329	329	329	329
Within R^2 // LL	0.049	0.051	-624.38	-620.65	-5635.76	-5626.41	-3459.43	-3458.32
Controls	No	Yes	No	Yes	No	Yes	No	Yes

Robust standard errors for OLS regressions. p-values in brackets. ***, ** and * denote significance at the 1%, 5% and 10% levels.

especially given that results from the self-administration condition demonstrate that subjects have difficulties understanding the added complexity of interior solutions, despite their willingness to do so. When employing the MPL version of the task, the 5-coin task is preferable because it enhances the consistency of subjects.

We saw that subjects answer VCTP similarly than MPL. We should therefore look at *how* field subjects are using the interior solutions of VCTP. Figure 3 displays the multi-histograms of allocations to the future in the 10-coin MPL and 10-coin VCTP tasks for each decision. The 5-coin case is relegated to the appendix (Figure A3) for the sake of concision. Both figures are quite similar and illustrate that the decreased utilization of interior solutions coincides with a tendency to distribute coins equally between periods. The multi-histograms therefore indicates that field subjects using interior solutions focus on the salient choice of separating coins equally between periods. In contrast to the findings of Prissé (2023), which show that lab participants utilize the full range of interior solutions with a modal distribution that increases with higher interest rates, the results of this experiment suggest that field participants may have a limited understanding of interior solutions. Furthermore, we observe that the allocation patterns of field subjects in the 10-coin task differ from those of lab subjects in the same task, as depicted in Figure A4. We observe that 24.85% of field subjects allocate everything to the future at a 0% interest rate, whereas only 4.64% of lab subjects do the same. A t-test rejects the equality between conditions ($p < 0.001$). Furthermore, 50.89% of field subjects switch entirely to future preference at the first positive interest rate of 20%, compared to 26.49% of lab subjects ($p < 0.001$). Addi-

Figure 3: *Multi-histograms of allocations to the future by task for the 10-coin task.*



tionally, 15.98% of field subjects allocate everything to the early period at the highest interest rate of 100%, whereas only 3.97% of lab subjects continue to do so ($p < 0.001$). These results suggest that a significant proportion of field subjects have strong preferences to receive the money later or to receive the money early. We overall conclude that field subjects have more polarized preference, which may be in stark contrast to the sophisticated preferences observed among lab participants..

The decreased level of subject sophistication in their responses to the task, coupled with the observed decrease in the quality of responses in the most challenging condition of the VCTP task when self-administered, prompts us to question whether subjects have a comprehensive understanding of the task. To address this, we included a question in which we asked subjects whether they found the task instructions clear, and only 35.87% reported that they did. Importantly, a t-test does not reveal any significant difference in this percentage between administration modes ($p = 0.568$). It is worth noting that although the question was posed at the end of the experiment, encompassing the instructions for both the first and second tasks, a t-test still does not yield any significant difference in the responses based on the first task answered ($p = 0.419$). This pattern is also observed when considering the number of coins ($p = 0.463$). We therefore find direct evidence that subjects do not have a clear understanding of the task, raising questions about its potential influence on the results. Table 5 repeats the previous analysis using $InstructionsClear$ as the explanatory variable and includes its interaction term with answering the VCTP task, denoted as *VCTP×InstructionsClear*. We see in column (3) that finding the instructions clear reduces consistency ($p = 0.012$) and this result remains significant in column (4) after adding controls ($p = 0.023$). Furthermore, column (7) indicates that finding the instructions clear increases the number of interior solutions ($p = 0.001$) in VCTP and this result remains significant in column (8) after adding controls ($p = 0.001$). Now examining the interaction term with VCTP, we observe in column (1) that subjects who found the instructions clear in VCTP need more time to answer it ($p = 0.031$), and this result remains significant in column (6) after adding controls ($p = 0.025$). We also see in column (5) that subjects who found the instructions clear in VCTP marginally decrease the number of future allocations ($p = 0.061$). These results indicate that subjects who found the instructions clear are more likely to use interior solutions and take the time to think about them. However, it is important to note

that these participants are also less likely to exhibit consistency, indicating that they may be using interior solutions incorrectly. Consequently, we will analyze whether the use of interior solutions is associated with a decrease in task performance.

Table 5: *OLS, probit and tobit estimations with fixed-effects of the impact of finding the instructions clear, VCTP mechanism, number of coins and administration mode on response time, consistency, allocations to the future and interior solutions.*

	(1) Time	(2) Time	(3) Cons	(4) Cons	(5) NumFut	(6) NumFut	(7) NumInt	(8) NumInt
$InstructionsClear$	-10.287	-11.137	-0.680**	-0.623**	0.124	-0.040	0.216***	0.227***
	(8.009)	(8.113)	(0.272)	(0.274)	(0.281)	(0.284)	(0.066)	(0.066)
	[0.199]	[0.170]	[0.012]	[0.023]	[0.659]	[0.887]	[0.001]	[0.001]
$VCTP$	-10.262	-10.953	-0.342	-0.291	0.697**	0.567	0.736***	0.740***
	(9.514)	(9.539)	(0.296)	(0.297)	(0.349)	(0.348)	(0.063)	(0.063)
	[0.281]	[0.251]	[0.248]	[0.328]	[0.046]	[0.103]	[0.000]	[0.000]
$SelfAdmin$	9.390	9.366	1.252***	1.266***	0.523*	0.517*	0.161**	0.160**
	(7.791)	(7.796)	(0.332)	(0.333)	(0.275)	(0.274)	(0.063)	(0.063)
	[0.228]	[0.230]	[0.000]	[0.000]	[0.057]	[0.059]	[0.011]	[0.011]
$FiveBalls$	-32.973***	-33.966***	0.512*	0.560**	0.427	0.298	-0.214***	-0.215***
	(7.633)	(7.680)	(0.275)	(0.276)	(0.273)	(0.274)	(0.063)	(0.063)
	[0.000]	[0.000]	[0.063]	[0.043]	[0.118]	[0.277]	[0.001]	[0.001]
VCTP×SelfAdmin	37.658***	38.276***	-2.098***	-2.139***	-0.772**	-0.727*		
	(10.757)	(10.780)	(0.374)	(0.375)	(0.381)	(0.380)		
	[0.000]	[0.000]	[0.000]	[0.000]	[0.042]	[0.055]		
VCTP×FiveBalls	9.053	10.457	-0.524	-0.607*	-0.617	-0.430		
	(10.539)	(10.602)	(0.323)	(0.325)	(0.379)	(0.379)		
	[0.390]	[0.324]	[0.105]	[0.062]	[0.103]	[0.257]		
VCTP×InstructionsClear	24.016**	25.025**	0.355	0.281	-0.741*	-0.551		
	(11.120)	(11.184)	(0.323)	(0.325)	(0.395)	(0.396)		
	[0.031]	[0.025]	[0.271]	[0.387]	[0.061]	[0.163]		
Age		-0.181		0.018**		-0.040***		0.003
		(0.306)		(0.009)		(0.011)		(0.004)
		[0.554]		[0.041]		[0.000]		[0.405]
$Female$		8.727		-0.345		0.555**		0.143
		(7.843)		(0.220)		(0.281)		(0.094)
		[0.266]		[0.118]		[0.048]		[0.128]
Constant	234.515***	233.568***			6.181***	7.159***	-0.018	-0.250
	(7.257)	(15.258)			(0.773)	(0.907)	(0.068)	(0.170)
	[0.000]	[0.000]			[0.000]	[0.000]	[0.790]	[0.141]
Estimation Method	OLS	OLS	Logit	Logit	Tobit	Tobit	Tobit	Tobit
Fixed Effect // Round Fixed Effect	FE	FE	RFE	RFE	RFE	RFE	RFE	RFE
Number of Round	6	6	5	5	6	6	6	6
Observations	289	289	328	328	328	328	328	328
Within R^2 // LL	0.051	0.051	-614.49	-610.74	-5616.19	-5607.06	-3446.01	-3444.59
Controls	No	Yes	No	Yes	No	Yes	No	Yes

Robust standard errors for OLS regressions. p-values in brackets. ***, ** and * denote significance at the 1%, 5% and 10% levels.

We therefore investigate whether this decline in the quality of responses is associated with the use of interior solutions. Table 6 presents the results of linear regressions that estimate the effect of $UseInterior$ on response time with fixed-effects, and on consistency, the number of future allocations, and the number of interior solutions with round fixed-effects. We also employ interaction terms between $UseInterior$ and $SelfAdmin$ and between $UseInterior$ and $FiveCoins$ to explore whether there is a specific impact of using interior solutions when subjects are self-administered or when they are answering the 5-coin task. We see in column (1) that using interior solutions increases response time by an estimated 90 seconds ($p < 0.001$), and

this result remains significant in column (2) after adding controls ($p < 0.001$). Column (3) shows that using interior solutions decreases the likelihood of being consistent in the task ($p < 0.001$), and this result remains significant in column (4) after adding controls ($p < 0.001$).

We also observe that using interior solutions marginally decreases the number of future solutions in column (5) ($p = 0.060$), and this result remains significant in column (6) after adding controls ($p = 0.065$). Finally, the $UseInterior$ coefficient in column (7) and (8) indicates that subjects using interior solutions in the VCTP 10-coin task are estimated to utilize approximately 2.5 out of 9 in each decision ($p < 0.001$ for both). Now, examining the interaction terms, we observe in column (5) that using interior solutions when being self-administered marginally increases the number of interior solutions ($p = 0.052$), and this result remains significant after adding controls ($p = 0.093$). Column (1) estimates that using interior solutions when answering the 5-coin version of the task reduces response time ($p = 0.002$), with this result remaining significant after adding controls ($p = 0.003$). Furthermore, Column (3) shows that using interior solutions when answering the 5-coin version of the task strongly decreases consistency in the task ($p < 0.001$) with this result remaining significant in column (4) after adding controls ($p < 0.001$).

Table 6: *OLS, probit and tobit estimations with fixed-effects of the impact of using interior solutions, number of coins and administration mode on response time, consistency, allocations to the future and interior solutions.*

	(1) Time	(2) Time	(3) Cons	(4) Cons	(5) NumFut	(6) NumFut	(7) NumInt	(8) NumInt
$UseInterior$	93.523***	93.181***	-1.578***	-1.604***	-0.881*	-0.852*	2.517***	2.524***
	(12.000)	(12.001)	(0.324)	(0.327)	(0.468)	(0.462)	(0.103)	(0.103)
	[0.000]	[0.000]	[0.000]	[0.000]	[0.060]	[0.065]	[0.000]	[0.000]
$SelfAdmin$	46.824***	47.591***	-0.364	-0.400	-0.590*	-0.459	-0.069	-0.068
	(8.138)	(8.197)	(0.293)	(0.295)	(0.312)	(0.309)	(0.095)	(0.095)
	[0.000]	[0.000]	[0.215]	[0.175]	[0.059]	[0.137]	[0.466]	[0.477]
$FiveCoins$	-8.701	-8.338	0.896***	0.873***	-0.182	-0.084	-0.297***	-0.301***
	(7.873)	(7.882)	(0.319)	(0.320)	(0.306)	(0.303)	(0.094)	(0.094)
	[0.269]	[0.290]	[0.005]	[0.006]	[0.553]	[0.781]	[0.002]	[0.001]
UseInterior×SelfAdmin	-3.676	-3.168	-0.374	-0.311	1.098*	0.940*		
	(15.767)	(15.978)	(0.402)	(0.405)	(0.564)	(0.559)		
	[0.816]	[0.843]	[0.353]	[0.442]	[0.052]	[0.093]		
UseInterior×FiveCoins	-48.275***	-47.481***	-2.095***	-2.111***	-0.195	-0.175		
	(15.921)	(15.917)	(0.429)	(0.431)	(0.564)	(0.557)		
	[0.002]	[0.003]	[0.000]	[0.000]	[0.729]	[0.753]		
Age		0.234		0.024*		-0.041***		0.011**
		(0.417)		(0.013)		(0.015)		(0.006)
		[0.575]		[0.067]		[0.006]		[0.044]
$Female$		16.317*		-0.205		1.459***		0.156
		(9.203)		(0.288)		(0.347)		(0.128)
		[0.077]		[0.477]		[0.000]		[0.225]
Constant	202.374***	180.247***			6.920***	7.017***	0.169**	-0.345
	(6.296)	(17.704)			(0.694)	(0.916)	(0.081)	(0.237)
	[0.000]	[0.000]			[0.000]	[0.000]	[0.038]	[0.146]
Estimation Method	OLS	OLS	Logit	Logit	Tobit	Tobit	Tobit	Tobit
Fixed Effect // Round Fixed Effect	FE	FE	RFE	RFE	RFE	RFE	RFE	RFE
Number of Round	6	6	5	5	6	6	6	6
Observations	152	152	172	172	172	172	172	172
Within R^2 // LL	0.152	0.155	-310.41	-308.50	-2928.54	-2915.49	-1881.09	-1878.44
Controls	No	Yes	No	Yes	No	Yes	No	Yes

Robust standard errors for OLS regressions. p-values in brackets. ***, ** and * denote significance at the 1%, 5% and 10% levels.

Additionally, we remark that self-administration increases response time in column (1) ($p < 0.001$) with

this result remaining significant in column (2) after adding controls ($p < 0.001$). Self-administration also decreases the number of future solutions in column (5) ($p = 0.059$), but this effect disappears after adding controls. Regarding the number of coins of the task, column (3) shows that the 5-coin task marginally increase consistency ($p = 0.005$) and this result remains significant after adding controls ($p = 0.006$). The 5-coin task also decreases the number of interior solutions in column (7) ($p = 0.002$) and this result remains significant in column (8) after adding controls ($p = 0.001$). It should be noted that older subjects exhibit marginally higher consistency in column (4) ($p = 0.067$), allocate less to the future in column (6) ($p = 0.006$), and make more extensive use of interior solutions in column (8) ($p = 0.044$). We also see that female subjects have marginally higher response time in column (2) ($p = 0.077$) and that they allocate more to the future in column (6) ($p < 0.001$). We therefore conclude that using interior solutions leads to increased response times and reduced consistency, with this effect being particularly pronounced in the 5-coin version of the task. This provides direct evidence that the decrease in the quality of results is associated with the added complexity of VCTP, supporting the use of MPL with field subjects. Additionally, our findings suggest that the 5-coin version of the VCTP task not only reduces the precision of the task but also diminishes consistency, further supporting the conclusion that the 5-coin task is not superior to the 10-coin version.

6. Discussion

We evaluated the VCTP task of Prissé (2023) in a field setting, comparing it to the MPL mechanism using the same experimental design. Our aim was to validate the results of the lab experiment in a real-world context, demonstrating that VCTP requires a similar amount of time and exhibits similar consistency to MPL, while measuring time preferences with greater precision. Additionally, we investigated whether external administration was necessary to maintain data quality and whether reducing the number of task coins to five would enhance data quality. We found that field subjects respond similarly in terms of response time, consistency, and the number of future allocations in both the VCTP and MPL tasks. Additionally, they demonstrate limited utilization of the interior solutions within the VCTP. When participants do utilize these solutions, it leads to longer response times and decreased consistency, suggesting that they struggle with the additional complexity of the VCTP task. The results indicate no advantage of the VCTP task over MPL in the field. We found that enumerators are essential for maintaining sample size and data quality in the VCTP task by reducing response times and increasing consistency. Importantly, they also do not influence the elicitation of time preferences.

Finally, we found that the 5-coin version of the task is not an improvement over the 10-coin version. Although it reduces task time and increases consistency in MPL, it also decreases the precision of responses and consistency in VCTP. These results suggest that the 5-coin MPL is perhaps the most suitable option for field subjects. Overall, we conclude that the visual methodology passes the test in the field, since subjects answer the task quickly, exhibit high consistency and reveal their time preferences. However, the results also indicate that subjects struggle to understand the task, suggesting that the simplest 5-coin MPL version may be the most suitable option for them. These contradictory pieces of evidence regarding result quality and the reduced understanding of subjects lead to an intriguing possibility: the visual methodology allows subjects to navigate complexities they might otherwise find overwhelming by facilitating their use of salient allocations. We conclude that the visual methodology may improve the quality of data collected in the field by reducing the complexity that subjects need to understand to respond accurately to the task.

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A. Appendix

A.1. Experimental Design

Figure A1: *Experimental design of the laboratory task with 60% interest rate*

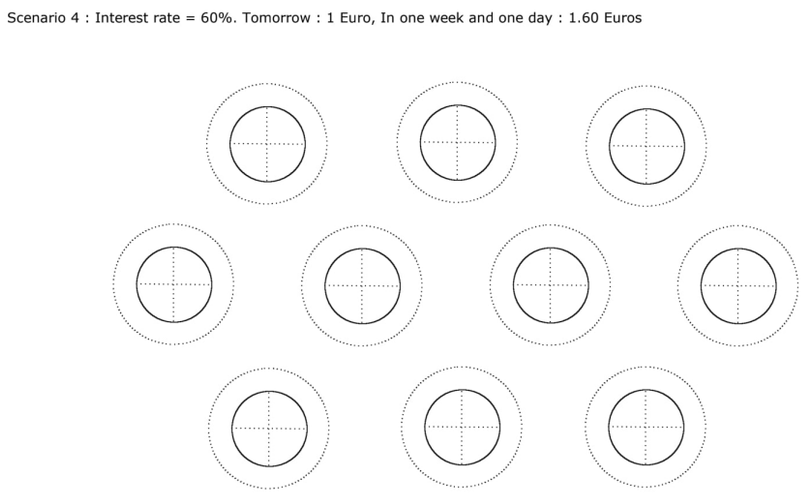
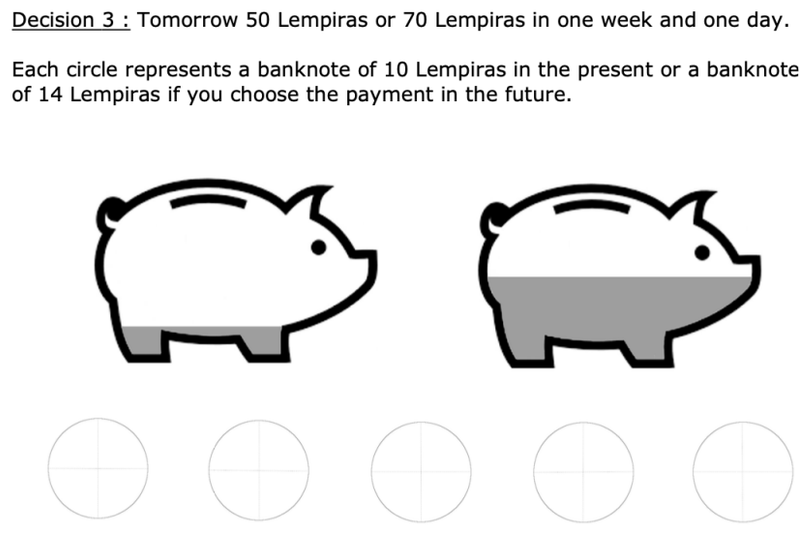


Figure A2: *Experimental design of the 5-coins task with 60% interest rate*



A.2. Balance Check

Table A1: *Balance check by number of coins*

$Overall$	n	$mean_5$	$mean_{10}$	$5-10$	$p-value$	$adj.p-value$
Age	329	33.5	33.95	-0.45	0.641	0.886
Female	329	0.875	0.858	0.017	0.652	0.886
$MPL\ SelfAdmin$	n	$mean_5$	$mean_{10}$	$5-10$	$p-value$	$adj.p-value$
Age	68	32.6	34.79	-2.19	0.364	0.591
Female	68	0.943	0.879	-0.064	0.359	0.591
$MPL\ ExtAdmin$	n	$mean_5$	$mean_{10}$	$5-10$	$p-value$	$adj.p-value$
Age	89	32.32	33.90	-1.58	0.365	0.439
Female	89	0.915	0.833	0.082	0.248	0.439
$VCTP\ SelfAdmin$	n	$mean_5$	$mean_{10}$	$5-10$	$p-value$	$adj.p-value$
Age	78	35.24	33.52	1.72	0.382	0.398
Female	78	0.735	0.886	-0.151	0.087	0.168
$VCTP\ ExtAdmin$	n	$mean_5$	$mean_{10}$	$5-10$	$p-value$	$adj.p-value$
Age	94	34.14	33.8	0.34	0.848	0.870
Female	94	0.886	0.84	0.046	0.521	0.805

Table A2: *Balance check by administration mode*

$Overall$	n	$mean_S$	$mean_E$	$S-E$	$p-value$	$adj.p-value$
Age	329	33.99	33.52	0.47	0.632	0.844
Female	329	0.863	0.869	-0.006	0.878	0.878
$MPL\ FiveCoins$	n	$mean_S$	$mean_E$	$S-E$	$p-value$	$adj.p-value$
Age	82	32.6	32.32	0.28	0.875	0.900
Female	82	0.943	0.915	0.028	0.636	0.882
$MPL\ TenCoins$	n	$mean_S$	$mean_E$	$S-E$	$p-value$	$adj.p-value$
Age	75	34.79	33.9	0.89	0.703	0.833
Female	75	0.879	0.833	0.046	0.587	0.833
$VCTP\ FiveCoins$	n	$mean_S$	$mean_E$	$S-E$	$p-value$	$adj.p-value$
Age	78	35.24	34.14	1.10	0.609	0.627
Female	78	0.735	0.886	-0.151	0.087	0.192
$VCTP\ TenCoins$	n	$mean_S$	$mean_E$	$S-E$	$p-value$	$adj.p-value$
Age	94	33.52	33.8	-0.28	0.609	0.578
Female	94	0.886	0.84	0.046	0.087	0.175

A.3. Results

A.3.1 Summary of variables

We complements the descriptive results in the main text by presenting a summary of the variables in our analysis according to the number of coins, the administration mode, the task and number of coins, and the task and administration mode. We discuss only statistically significant differences using t-tests for the sake of conciseness.

We first compare the experimental conditions by number of coins. Table A3 shows us that subjects need

on average 211.6 seconds to answer the 5-coin task and 241.52 second to answer the 10-coin task, with a one-sided t-test rejecting the equality between conditions ($p = 0.011$). We also see that subjects use on average 3.12 interior solutions in the 5-coin task and 5.80 interior solutions in the 10-coin task, with a t-test rejecting the equality between conditions ($p = 0.057$). It therefore indicates that the 5-coin task reduces response time but also decreases the precision of results.

Table A3: *Summary statistics for the main variables used in our analysis by number of coins*

Variable	*Definition*	*n*	*Mean*	*Std.Dev*	*Min*	*Med*	*Max*
Time5	Response time in the 5-coins task (in seconds)	140	211.6	114.38	54	180.5	598
Time10	Response time in the 10-coins task (in seconds)	150	241.52	107.27	86	222.5	651
Cons5	Consistency of subjects in the 5-coins task	160	0.813	0.392	0	1	1
Cons10	Consistency of subjects in the 10-coins task	169	0.781	0.415	0	1	1
NumFut5	Number of future allocations in the 5-coins task	160	39.78	18.34	0	50	60
NumFut10	Number of future allocations in the 10-coins task	169	39.08	18.26	0	40	60
NumInt5	Number of interior solutions used in the 5-coins task	160	3.12	6.56	0	0	26
NumInt10	Number of interior solutions used in the 10-coins task	169	5.80	10.87	0	0	40

We then compare experimental conditions by administration mode. Table A4 shows us that subjects on average answer the task in 246.18 seconds when they are self-administrated and in 214.70 seconds when they are externally-administrated, with a one-sided t-test rejecting the equality between conditions at 1% ($p = 0.009$). Results also indicate that 82.51% externally-administered subjects are consistent and 76.03% self-administered subjects, with a one-sided t-test marginally rejecting the equality between conditions ($p = 0.074$). Additionally, we see that self-administered subjects use 5.63 interior solutions on average while externally-administered subjects use 3.71 of them on average, with a one-sided t-test marginally rejecting equality between conditions ($p = 0.088$). Overall, results suggest that enumerators enhance the comprehension of subjects.

Table A4: *Summary statistics for the main variables used in our analysis by administration mode.*

Variable	*Definition*	*n*	*Mean*	*Std.Dev*	*Min*	*Med*	*Max*
TimeSelfAd	Response time in the self-administered task (in seconds)	114	246.18	112.16	54	228	592
TimeExtAd	Response time in the externally-administered task (in seconds)	176	214.70	109.74	82	183	651
ConsSelfAd	Consistency of subjects in the self-administered task	146	0.760	0.428	0	1	1
ConsExtAd	Consistency of subjects in the externally-administered task	183	0.825	0.381	0	1	1
NumFutSelfAd	Number of future allocations in the self-administered task	146	39.67	19.03	0	48	60
NumFutExtAd	Number of future allocations in the externally-administered task	183	39.22	17.70	0	44	60
NumIntSelfAd	Number of interior solutions used in the self-administered task	146	5.63	9.73	0	0	38
NumIntExtAd	Number of interior solutions used in the externally-administered task	183	3.71	8.77	0	0	40

We now compare experimental conditions by task and number of coins. Table A5 shows us that on average 90.2% of subjects are consistent in MPL and 71.8% of subjects are consistent in VCTP when using the 5-coin version of the task, with a t-test rejecting the equality between conditions at 1% ($p = 0.003$). We also find that on average 86.7% of subjects are consistent in MPL and 71.3% of subjects are consistent in VCTP in the 10-coin version of the task, with a t-test rejecting the equality between conditions ($p = 0.016$). It therefore shows that subjects are less consistent in VCTP regardless of the version of the task. This suggests that the 5-coin version does not address the lower consistency of VCTP.

Table A5: *Summary statistics for the main variables used in our analysis by task and number of coins.*

Variable	*Definition*	*n*	*Mean*	*Std.Dev*	*Min*	*Med*	*Max*
TimeMPL5	Response time in the MPL 5-balls task (in seconds)	71	202.07	108.61	54	174	598
TimeVCTP5	Response time in the VCTP 5-balls task (in seconds)	69	221.41	120.02	64	186	592
TimeMPL10	Response time in the MPL 10-balls task (in seconds)	67	234	114.14	86	219	651
TimeVCTP10	Response time in the VCTP 10-balls task (in seconds)	83	247.59	101.69	88	232	550
ConsMPL5	Consistency of subjects in the MPL 5-balls task	82	0.902	0.299	0	1	1
ConsVCTP5	Consistency of subjects in the VCTP 5-balls task	78	0.718	0.453	0	1	1
ConsMPL10	Consistency of subjects in the MPL 10-balls task	75	0.867	0.342	0	1	1
ConsVCTP10	Consistency of subjects in the VCTP 10-balls task	94	0.713	0.455	0	1	1
NumFutMPL5	Number of future allocations in the MPL 5-balls task	82	41.24	18.30	0	50	60
NumFutVCTP5	Number of future allocations in the VCTP 5-balls task	78	38.24	18.37	0	44	60
NumFutMPL10	Number of future allocations in the MPL 10-balls task	75	38.79	20.53	0	50	60
NumFutVCTP10	Number of future allocations in the VCTP 10-balls task	94	39.31	16.34	0	40	60

Finally, we compare experimental conditions by task and administration mode. Table A6 shows us that self-administered subjects on average answer in 224.37 seconds the MPL and 265.8 seconds the VCTP, with a t-test rejecting the equality between conditions ($p = 0.049$). We also see that 91.12% of self-administered subjects are consistent in MPL, compared to only 62.82% in VCTP. A t-test rejects the equality between conditions at 1%. These results suggest that subjects face challenges with the self-administered VCTP, indicating the need for enumerators to improve result quality.

Table A6: *Summary statistics for the main variables used in our analysis by task and administration mode.*

Variable	*Definition*	*n*	*Mean*	*Std.Dev*	*Min*	*Med*	*Max*
TimeMPLSelfAd	Response time in the MPL self-administered task (in seconds)	54	224.37	101.66	54	219.5	582
TimeVCTPSelfAd	Response time in the VCTP self-administered task (in seconds)	60	265.8	118.25	64	254.5	592
TimeMPLExtAd	Response time in the MPL externally-administered task (in seconds)	84	213.20	118.67	86	180	651
TimeVCTPExtAd	Response time in the VCTP externally-administered task (in seconds)	92	216.08	101.55	82	188.5	525
ConsMPLSelfAd	Consistency of subjects in the MPL self-administered task	68	0.912	0.286	0	1	1
ConsVCTPSelfAd	Consistency of subjects in the VCTP self-administered task	78	0.628	0.486	0	1	1
ConsMPLExtAd	Consistency of subjects in the MPL externally-administered task	89	0.865	0.343	0	1	1
ConsVCTPExtAd	Consistency of subjects in the MPL externally-administered task	94	0.787	0.411	0	1	1
NumFutMPLSelfAd	Number of future allocations in the MPL self-administered task	68	41.81	20.54	0	50	60
NumFutVCTPSelfAd	Number of future allocations in the VCTP self-administered task	78	37.81	17.54	0	40	60
NumFutMPLExtAd	Number of future allocations in the MPL externally-administered task	89	38.74	18.44	0	50	60
NumFutVCTPExtAd	Number of future allocations in the VCTP externally-administered task	94	39.67	17.05	0	40	60

Overall, we see that the 5-coin task decreases response time and precision without enhancing consistency, suggesting that it is not an improvement to the 10-coin task. We also see that enumerators increase the consistency of subjects, suggesting that they are needed for the understanding of subjects.

A.3.2 Results

Figure A3: *Multi-histograms of allocations to the future by task for the 5-coin task.*

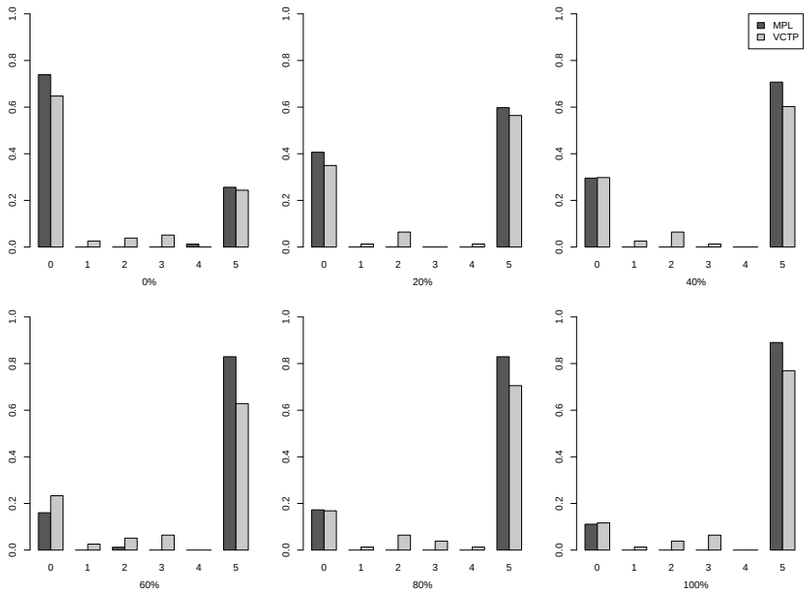
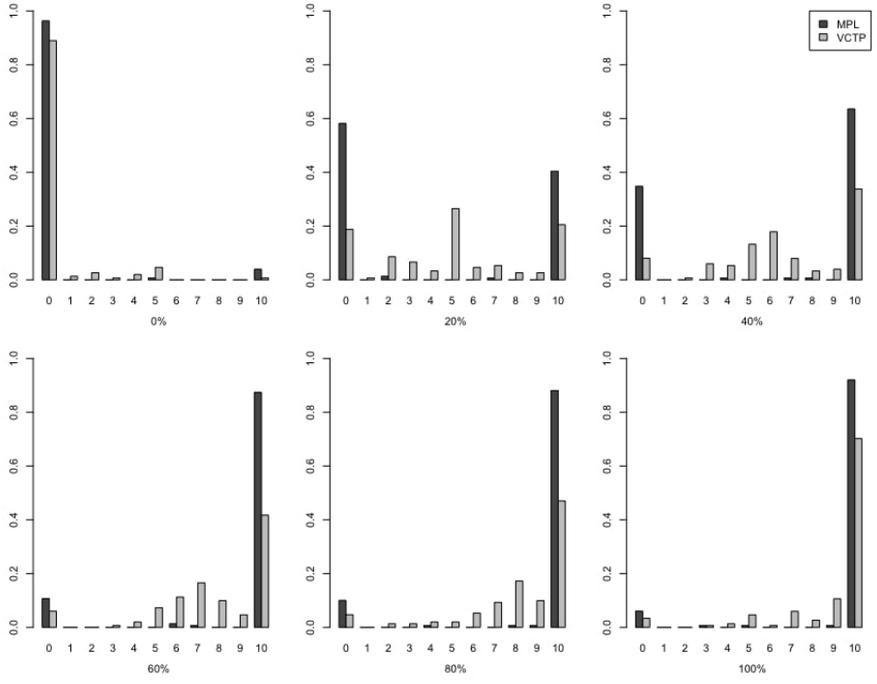


Figure A4: *Multi-histograms of allocations to the future by task in the lab experiment*.



B. Instructions and Experimental Design

B.1. Instructions of the Task

Figure A5: *Instructions of the task (Sheet 1)*

Welcome

The task consists in choosing between receiving a monetary payment in the close future (tomorrow, meaning in one day) or receiving a payment in a more distant future (one week and one day), with a compensation for waiting in the last case.

These decisions are made with **real** money. The quantity of money that you win will depend on your decisions and on the moment of time that you choose.

The money that you can win is represented by circles like the one on your right. Each circle represents **a banknote of 10 Lempiras in the present or a banknote of 10 Lempiras with an extra if you choose the payment in the future.** The exact quantity you will receive in the future (if you wait) is specified at the beginning of each scenario.

To make the task more simple we put two piggybanks in each scenario, like the ones below. The piggybank on the left represents the value of money in the present. The piggybank on the right represents the value of money in the future (relative to its present value).

To indicate if you want the quantity of money tomorrow or one week later, you will have to do the following:

- If you want to obtain the quantity of money in one day, mark with blue color the dotted cross inside the inner circle, as shown in the picture to the side:

- If you want to obtain the quantity of money in one week, you have to mark the cross with red color, as shown in the picture to the side:

What do you have to do ?

The task is composed of two parts. In each part you have to make decisions in six scenarios. Each scenario is composed of 5 "decision circles" (representing 50 Lempiras). In each case you will have to put 5 crosses (red or blue).

Each one of the 6 scenarios will have an interest rate associated that represents the bonus that you will receive if you decide to receive the bonus in one week. So that you understand better, we will indicate the numerical value (in Lempiras) of the payment you would receive "tomorrow" and the payment you would receive in "one week and one day". To make it more graphical, the size of the external circle will augment (depending on how much the monetary bonus increases).

It is important that you read the RULE that appears before each task. If you break the rule you will not be able to earn any money.

Figure A6: *Instructions of the task (Sheet 2)*

Summary

In each one of the six scenarios, you have to choose between receiving the money tomorrow or the money with a bonus in the future. If you want the money tomorrow, mark the cross in blue; if you want the money one week later, mark the cross in red.

How much do I earn and when do I get paid ?

When you finish all the exercise, we will randomly choose 1 scenario of the 12 for payment. We will see that you decided:

- To receive it tomorrow or
- To receive one week later,

and we will pay you the corresponding amount of money at the moment of your choice. If you choose to wait then you will have to wait a week and a day to receive this money.

Beginning of the task

You are going to do Part 1 and Part 2 successively. If you have any doubt you can come back here at any moment to read the instructions.

B.2. Experimental Task for 5-coin MPL

Figure A7: *5-coin MPL task (Sheet 1)*

Block M

Rule :

You can use **ONLY** one color in each one of the 6 scenarios

Please write the **start time** :

..... Hours ..... Minutes .....Seconds

Figure A8: *5-coin MPL task (Sheet 2)*

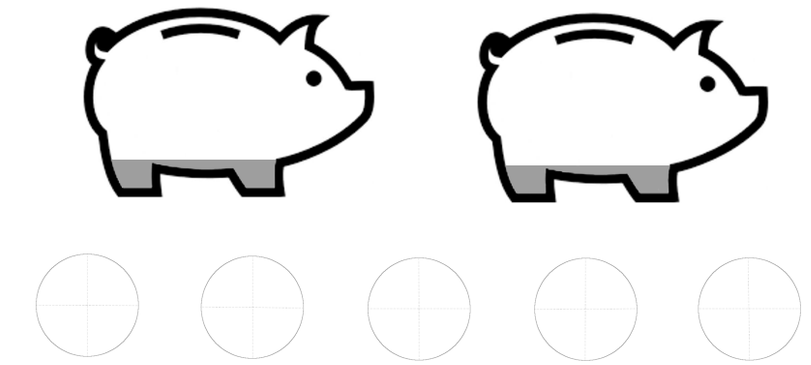


Figure A9: *5-coin MPL task (Sheet 3)*

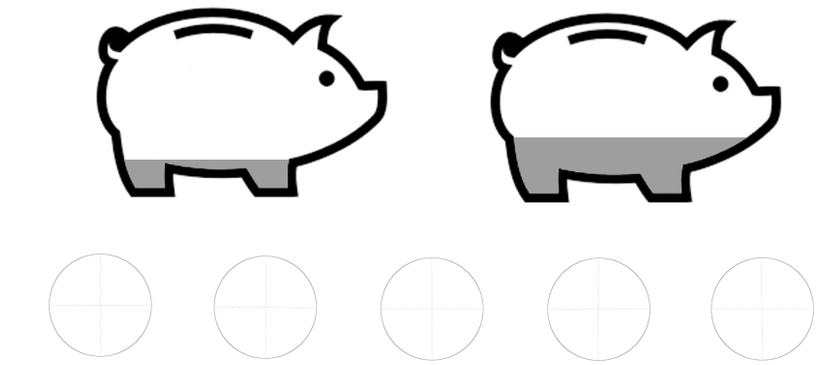


Figure A10: *5-coin MPL task (Sheet 4)*

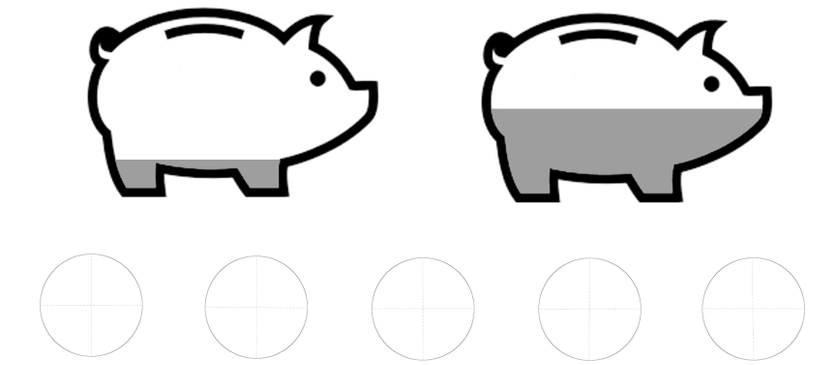


Figure A11: *5-coin MPL task (Sheet 5)*

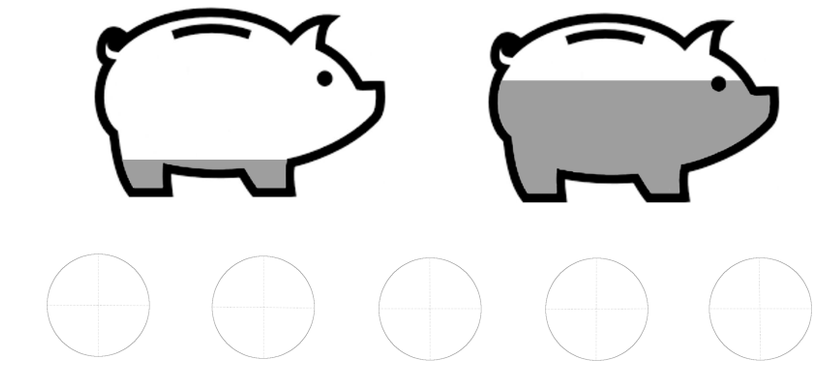


Figure A12: *5-coin MPL task (Sheet 6)*

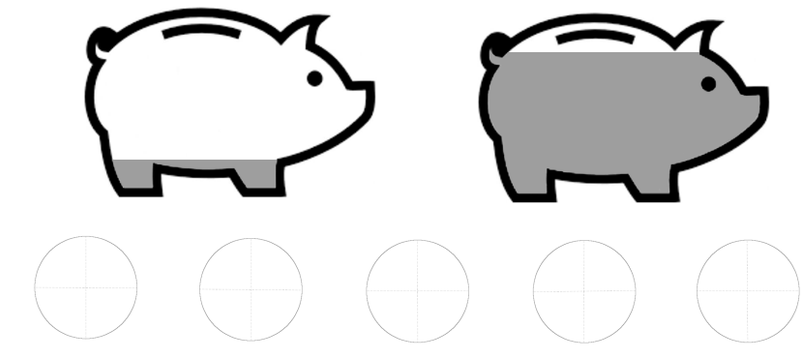
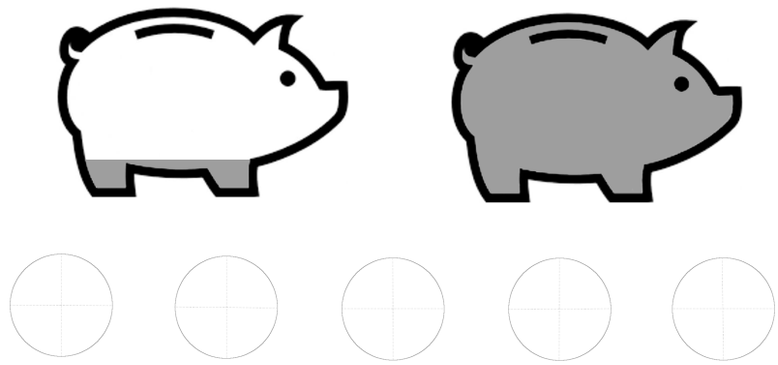


Figure A13: *5-coin MPL task (Sheet 7)*

Decision 6 : Tomorrow 50 Lempiras or 100 Lempiras in one week and one day.

Each circle represents a banknote of 10 Lempiras in the present and a banknote of 20 Lempiras if you choose the payment in the future.



Please write the **end time** :

..... Hours ..... Minutes..... Seconds

B.3. 5-coin task MPL-VCTP

Figure A14: *5-coin task MPL-VCTP (Sheet 1)*

Block M

Rule :

You can use **ONLY** one color in each one of the 6 scenarios

Please write the **start time** :

..... Hours ..... Minutes .....Seconds

Figure A15: *5-coin task MPL-VCTP (Sheet 2)*

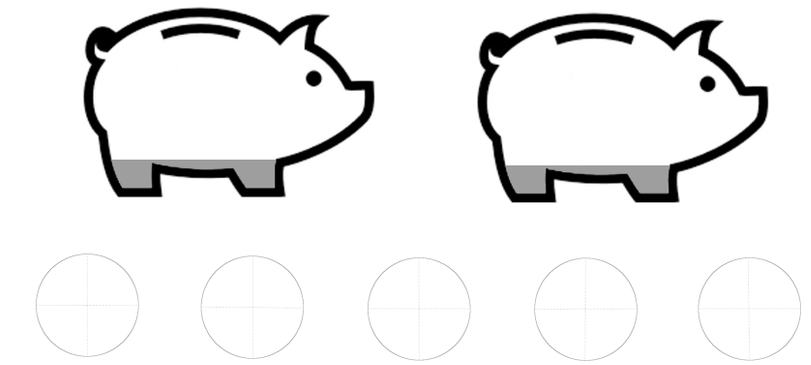


Figure A16: *5-coin task MPL-VCTP (Sheet 3)*

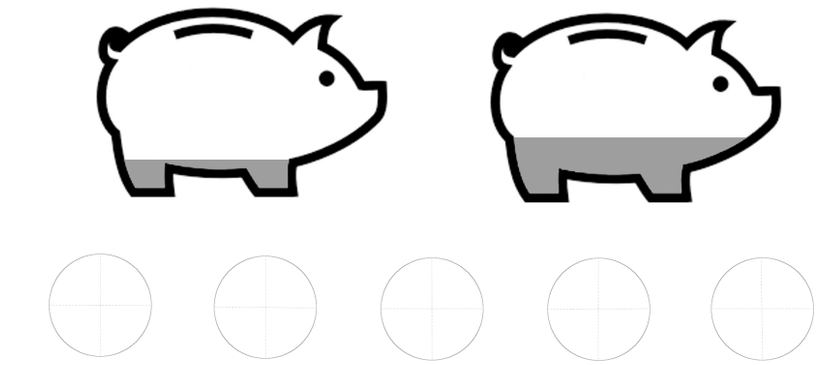


Figure A17: *5-coin task MPL-VCTP (Sheet 4)*

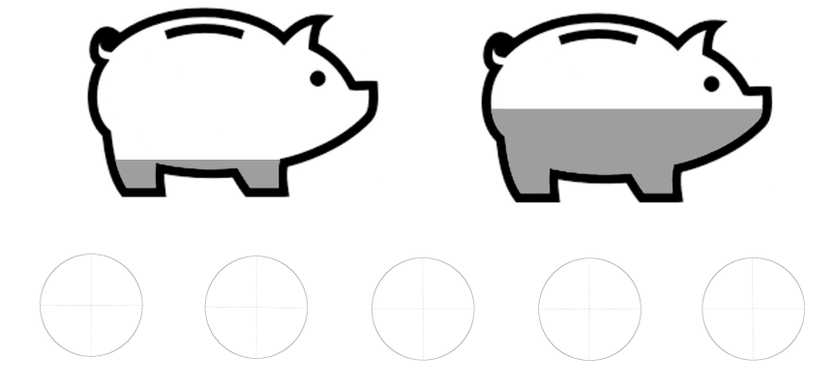


Figure A18: *5-coin task MPL-VCTP (Sheet 5)*

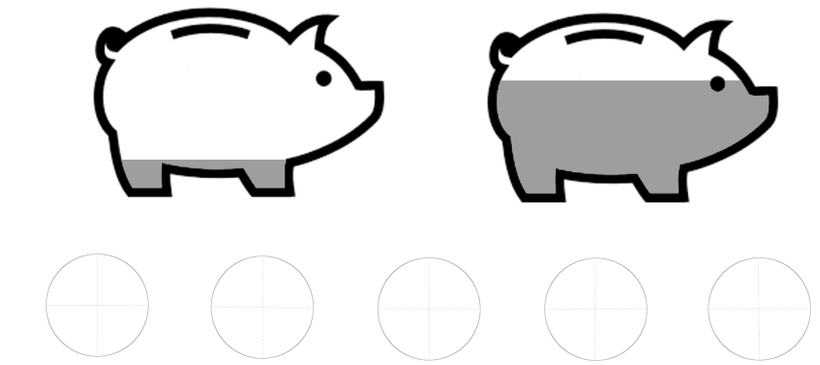


Figure A19: *5-coin task MPL-VCTP (Sheet 6)*

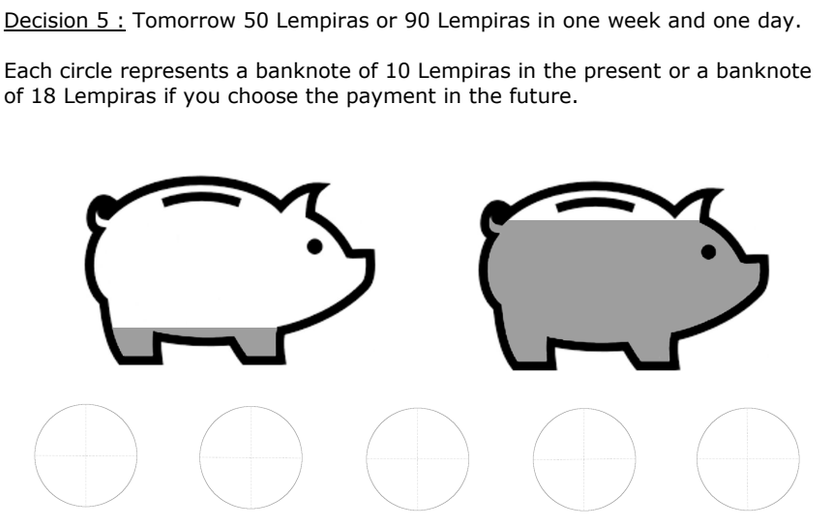


Figure A20: *5-coin task MPL-VCTP (Sheet 7)*

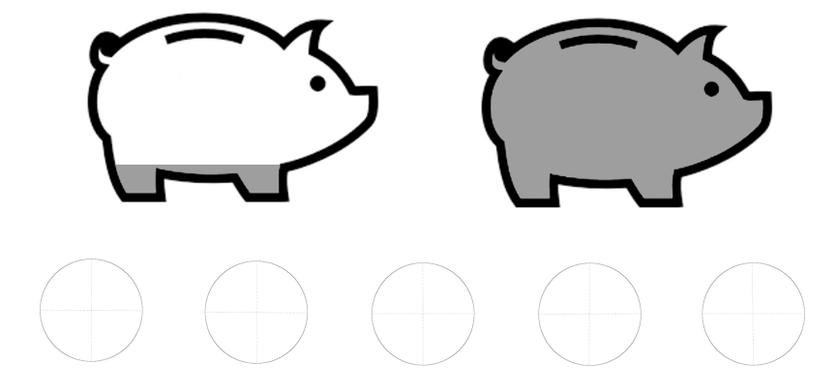


Figure A21: *5-coin task MPL-VCTP (Sheet 8)*

Block C

Rule :

You can use **BOTH** colors in each one of the 6 scenarios

Please write the **start time** :

..... Hours ..... Minutes .....Seconds

Figure A22: *5-coin task MPL-VCTP (Sheet 9)*

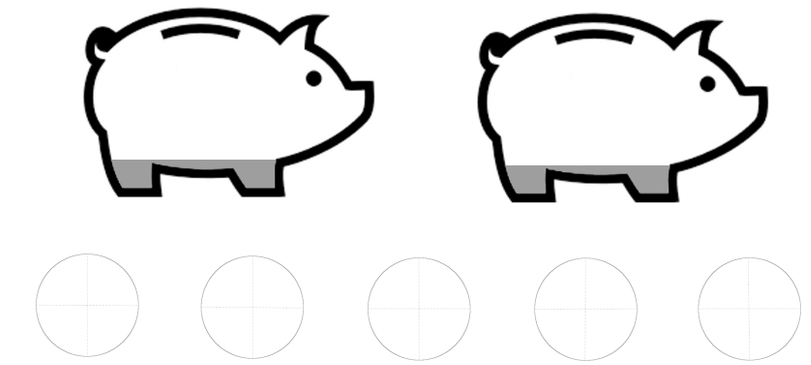


Figure A23: *5-coin task MPL-VCTP (Sheet 10)*

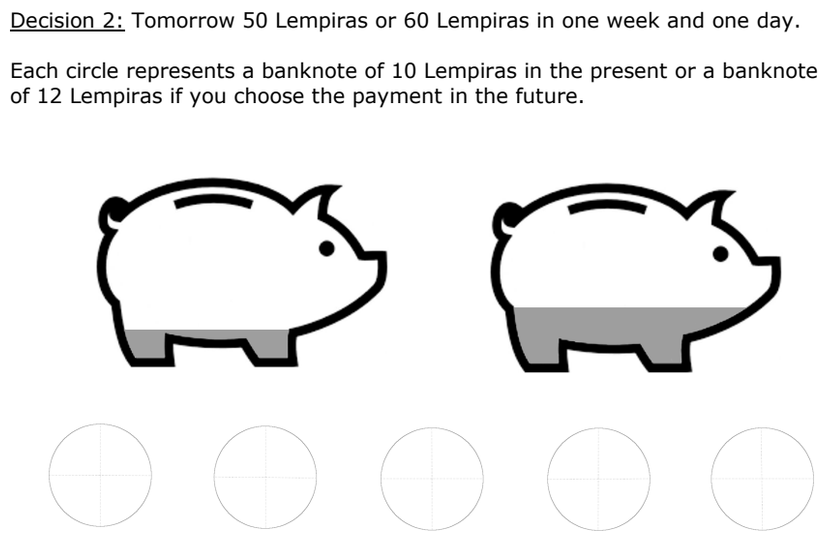


Figure A24: *5-coin task MPL-VCTP (Sheet 11)*

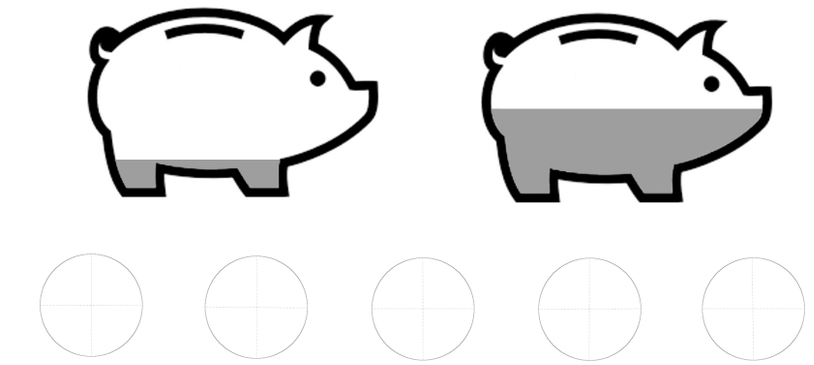


Figure A25: *5-coin task MPL-VCTP (Sheet 12)*

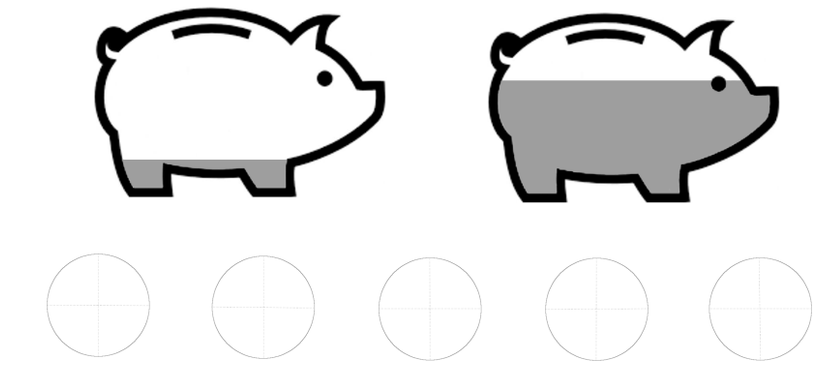


Figure A26: *5-coin task MPL-VCTP (Sheet 13)*

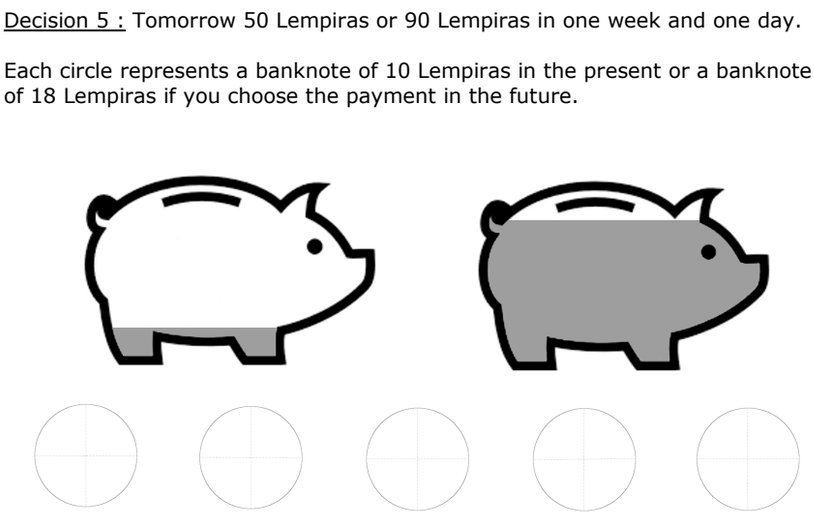
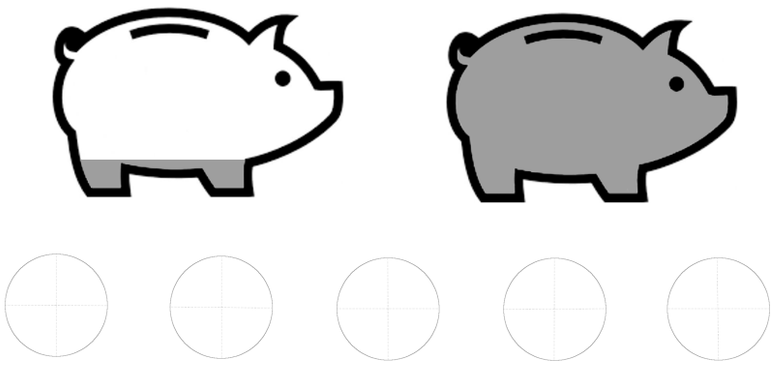


Figure A27: *5-coin task MPL-VCTP (Sheet 14)*

<u>Decision 6 :</u> Tomorrow 50 Lempiras or 100 Lempiras in one week and one day.

Each circle represents a banknote of 10 Lempiras in the present and a banknote of 20 Lempiras if you choose the payment in the future.



Please write the **end time** :

..... Hours ..... Minutes..... Seconds

B.4. 5-coin task VCTP-MPL

Figure A28: *5-coin task VCTP-MPL (Sheet 1)*

Block C

Rule :

You can use **BOTH** colors in each one of the 6 scenarios

Please write the **start time** :

..... Hours ..... Minutes .....Seconds

Figure A29: *5-coin task VCTP-MPL (Sheet 2)*

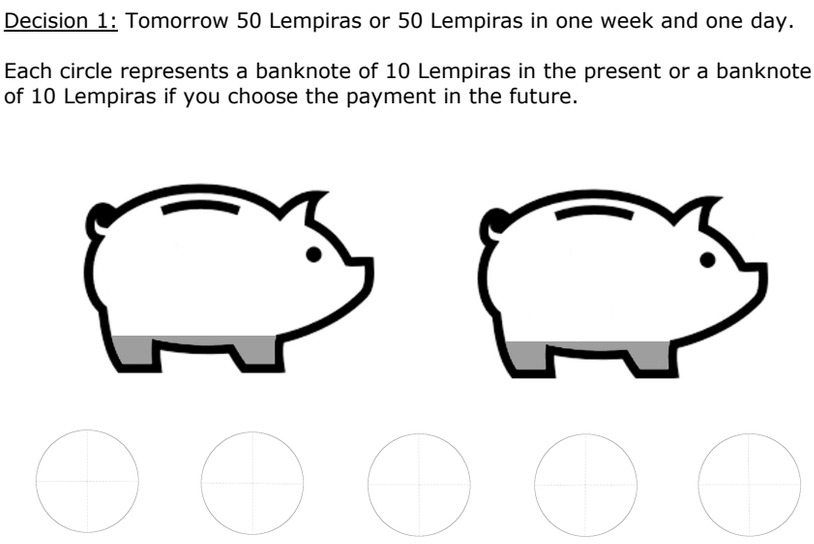


Figure A30: *5-coin task VCTP-MPL (Sheet 3)*

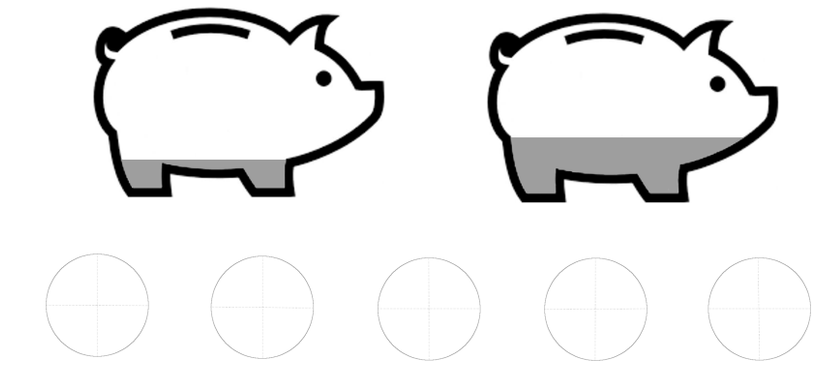


Figure A31: *5-coin task VCTP-MPL (Sheet 4)*

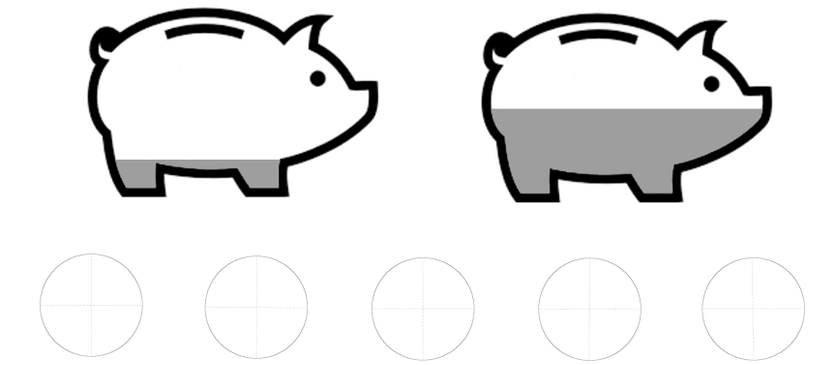


Figure A32: *5-coin task VCTP-MPL (Sheet 5)*

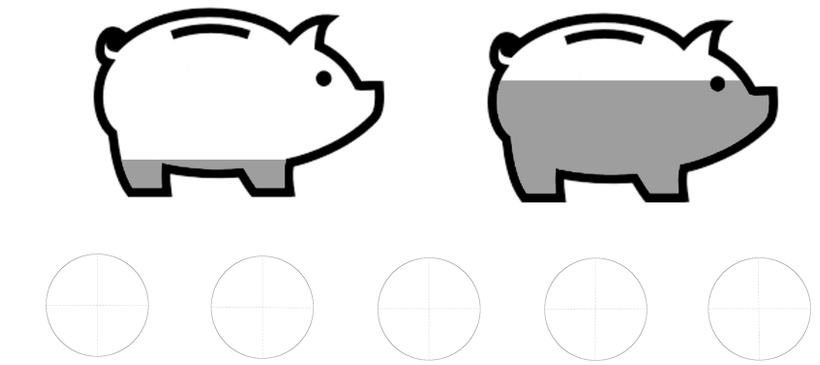


Figure A33: *5-coin task VCTP-MPL (Sheet 6)*

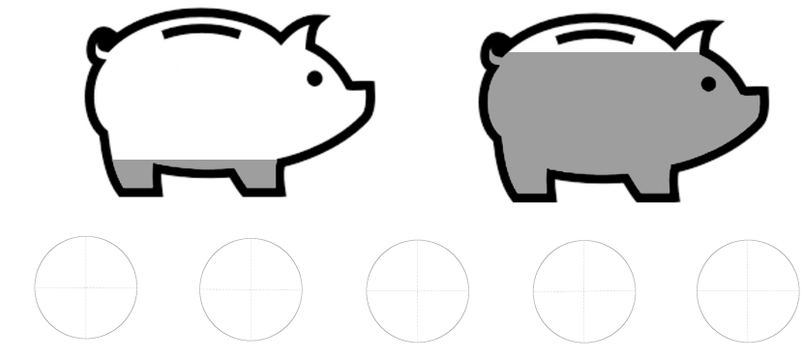
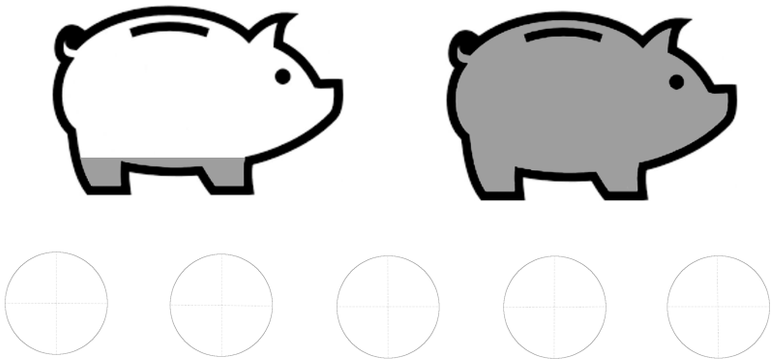


Figure A34: *5-coin task VCTP-MPL (Sheet 7)*

<u>Decision 6 :</u> Tomorrow 50 Lempiras or 100 Lempiras in one week and one day.

Each circle represents a banknote of 10 Lempiras in the present and a banknote of 20 Lempiras if you choose the payment in the future.



Please write the **end time** :

..... Hours ..... Minutes..... Seconds

Figure A35: *5-coin task VCTP-MPL (Sheet 8)*

Block M

Rule :

You can use **ONLY** one color in each one of the 6 scenarios

Please write the **start time** :

..... Hours ..... Minutes .....Seconds

Figure A36: *5-coin task VCTP-MPL (Sheet 9)*

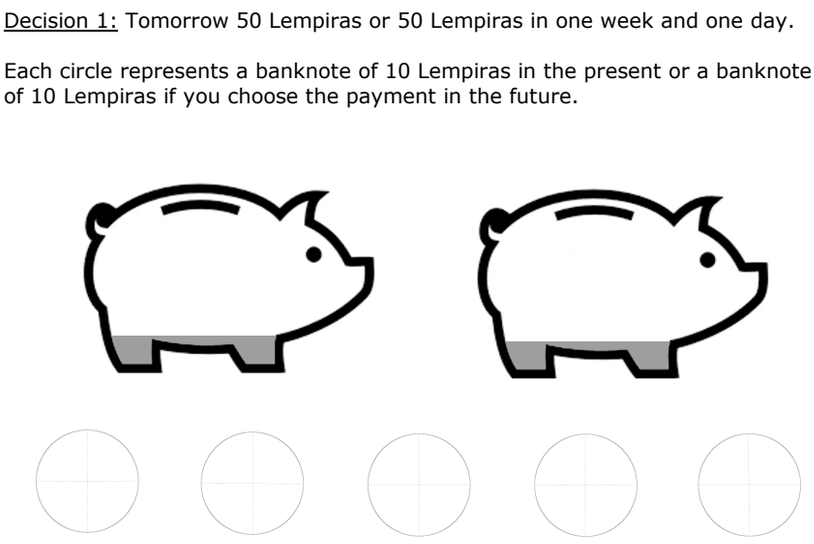


Figure A37: *5-coin task VCTP-MPL (Sheet 10)*

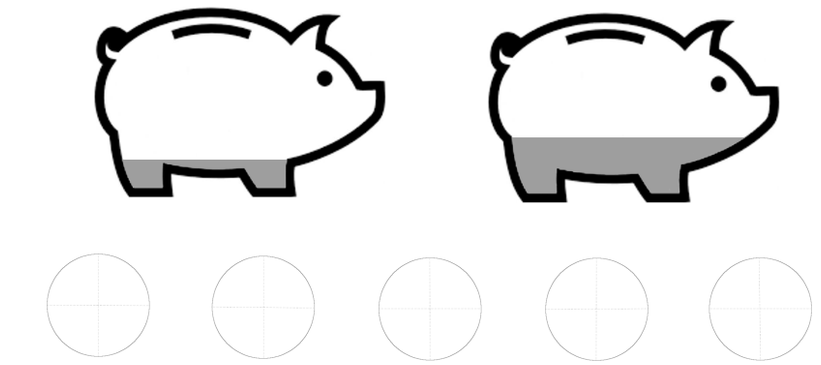


Figure A38: *5-coin task VCTP-MPL (Sheet 11)*

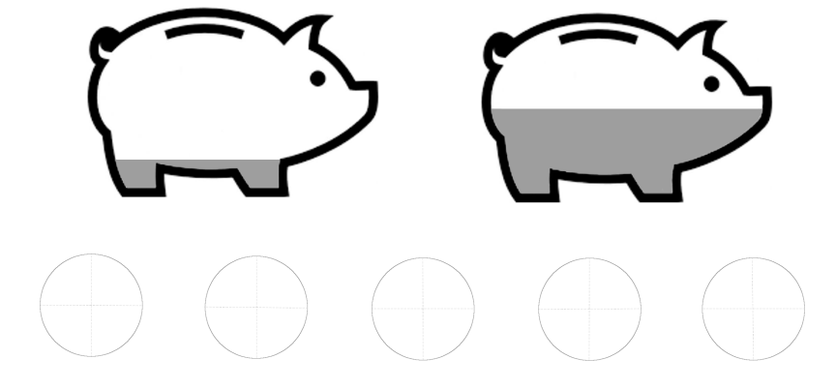


Figure A39: *5-coin task VCTP-MPL (Sheet 12)*

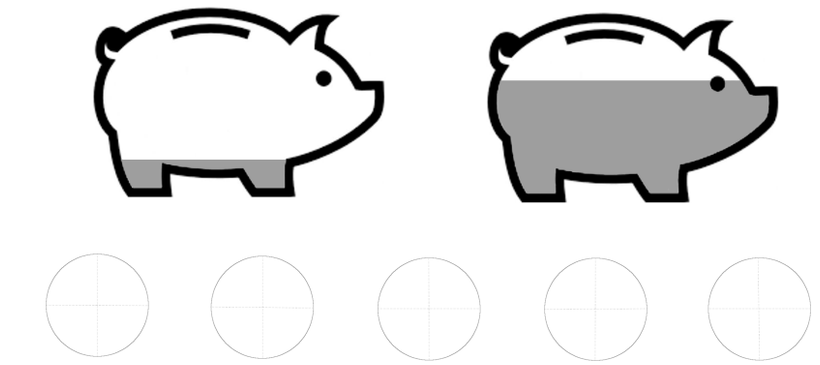


Figure A40: *5-coin task VCTP-MPL (Sheet 13)*

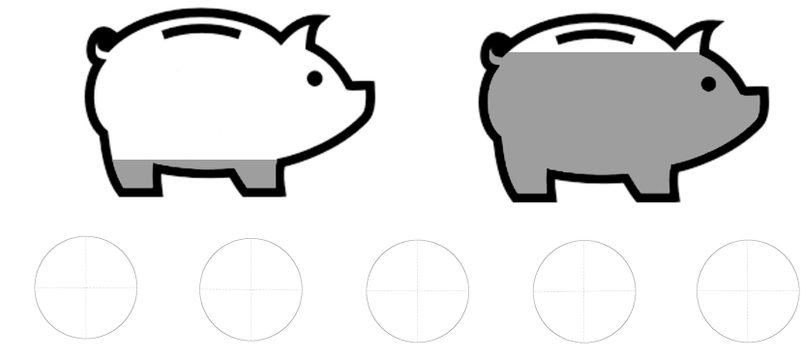
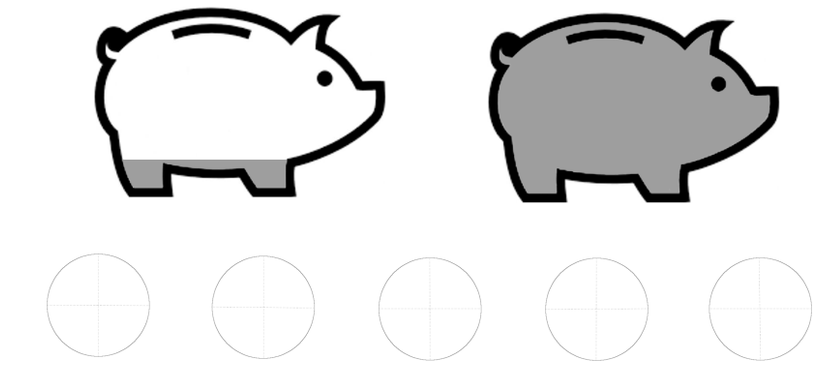


Figure A41: *5-coin task VCTP-MPL (Sheet 14)*



B.5. 10-coin task MPL-VCTP

Figure A42: *10-coin task MPL-VCTP (Sheet 1)*

Block M

Rule :

You can use **ONLY** one color in each one of the 6 scenarios

Please write the **start time** :

..... Hours ..... Minutes .....Seconds

Figure A43: *10-coin task MPL-VCTP (Sheet 2)*

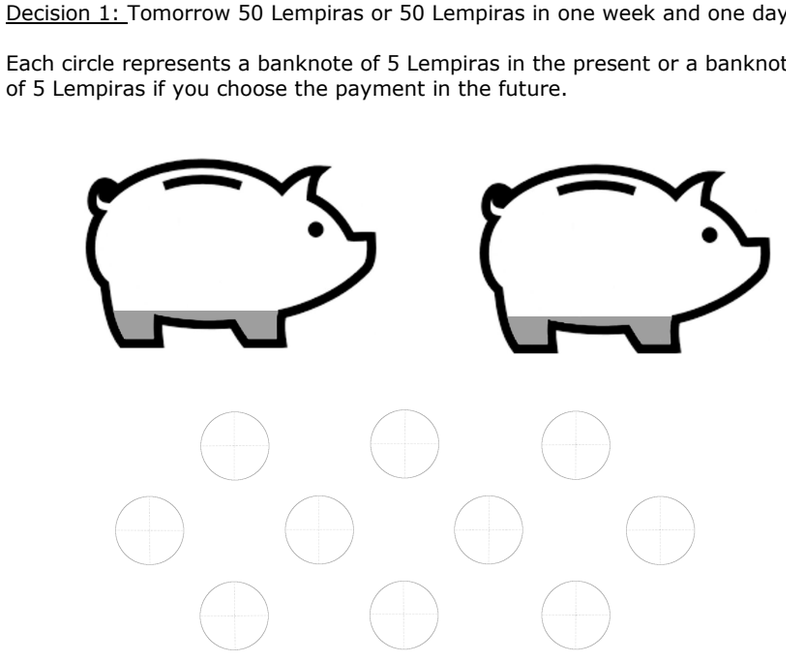


Figure A44: *10-coin task MPL-VCTP (Sheet 3)*

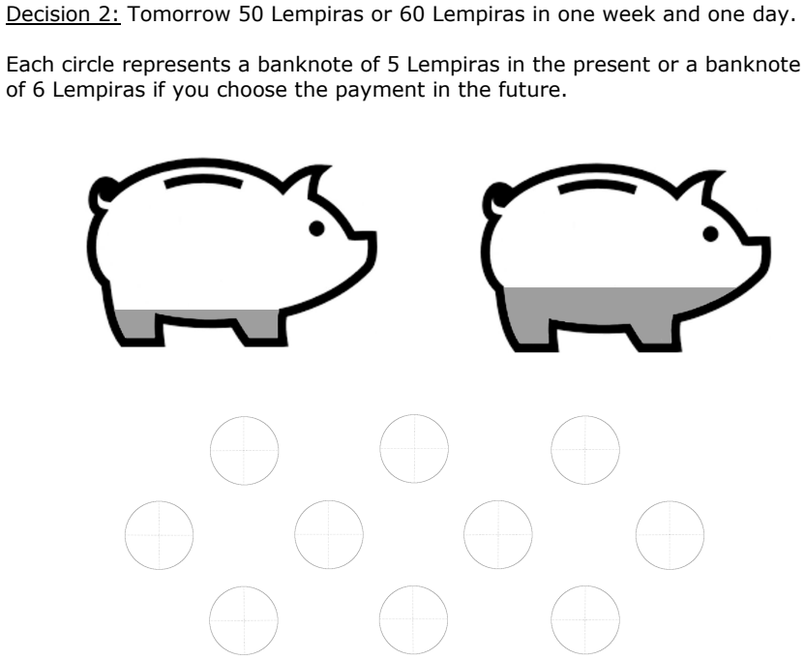


Figure A45: *10-coin task MPL-VCTP (Sheet 4)*

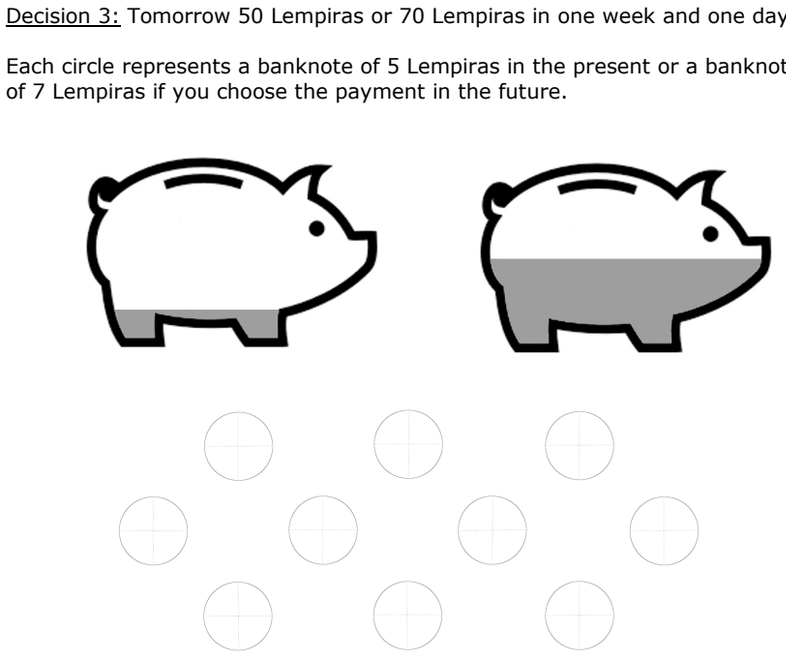


Figure A46: *10-coin task MPL-VCTP (Sheet 5)*

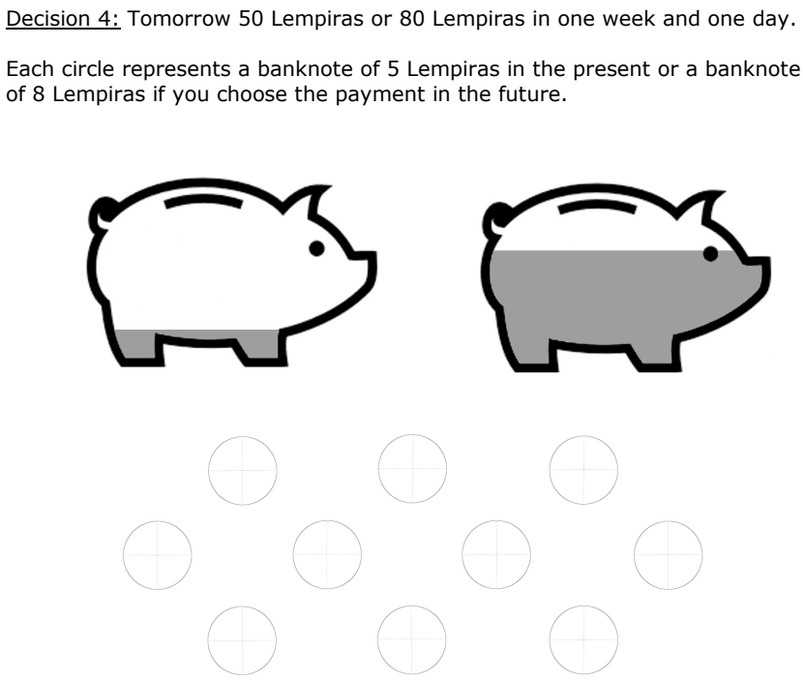


Figure A47: *10-coin task MPL-VCTP (Sheet 6)*

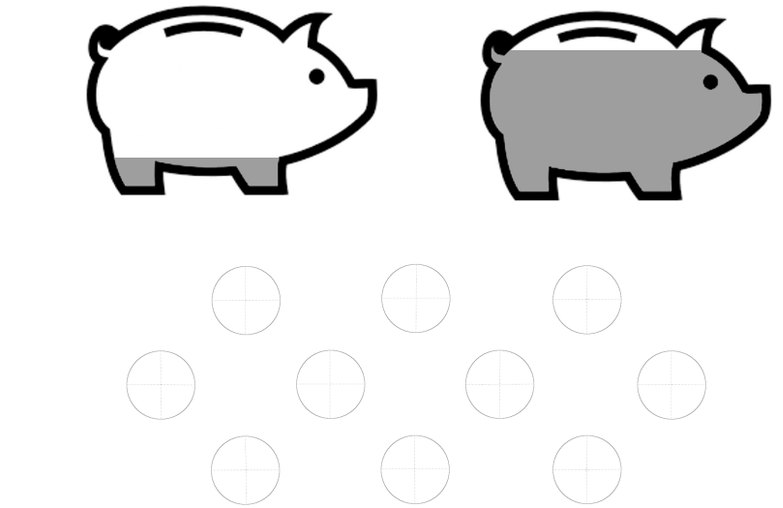


Figure A48: *10-coin task MPL-VCTP (Sheet 7)*

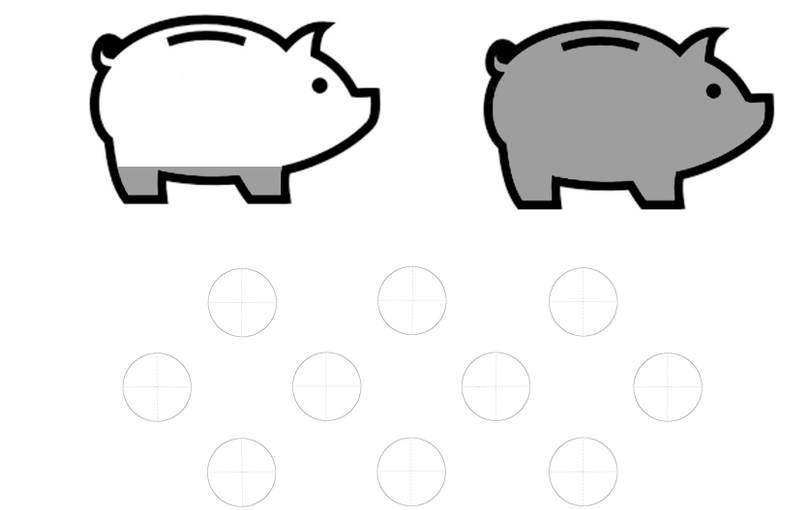


Figure A49: *10-coin task MPL-VCTP (Sheet 8)*

Block C

Rule :

You can use **EACH** colors in each one of the 6 scenarios

Please write the **start time** :

..... Hours ..... Minutes .....Seconds

Figure A50: *10-coin task MPL-VCTP (Sheet 9)*

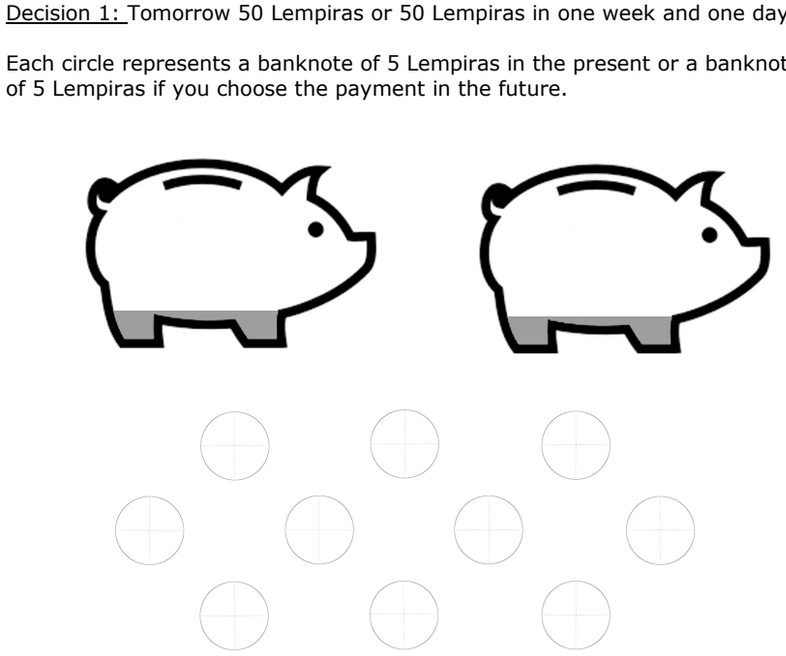


Figure A51: *10-coin task MPL-VCTP (Sheet 10)*

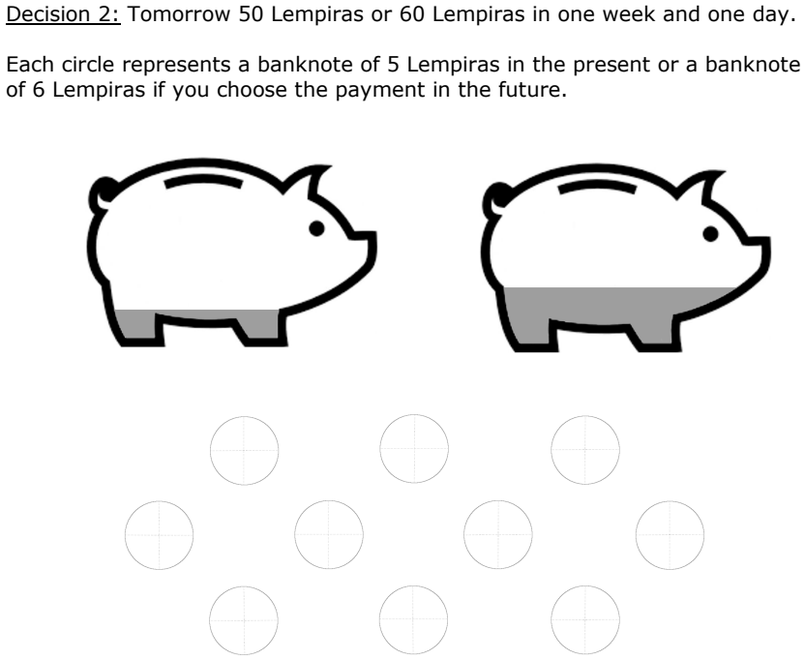


Figure A52: *10-coin task MPL-VCTP (Sheet 11)*

<u>Decision 3:</u> Tomorrow 50 Lempiras or 70 Lempiras in one week and one day.

Each circle represents a banknote of 5 Lempiras in the present or a banknote of 7 Lempiras if you choose the payment in the future.

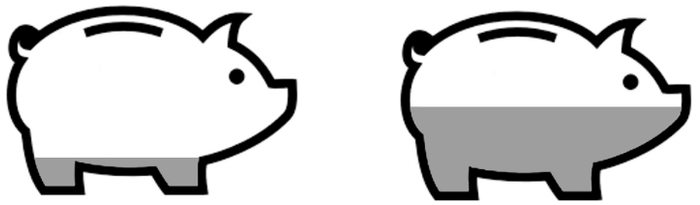


Figure A53: *10-coin task MPL-VCTP (Sheet 12)*

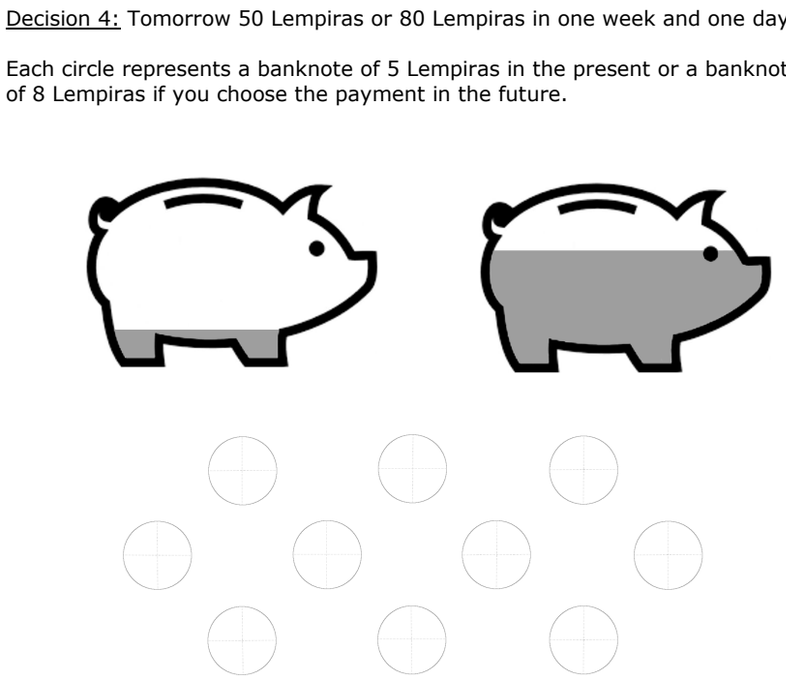


Figure A54: *10-coin task MPL-VCTP (Sheet 13)*

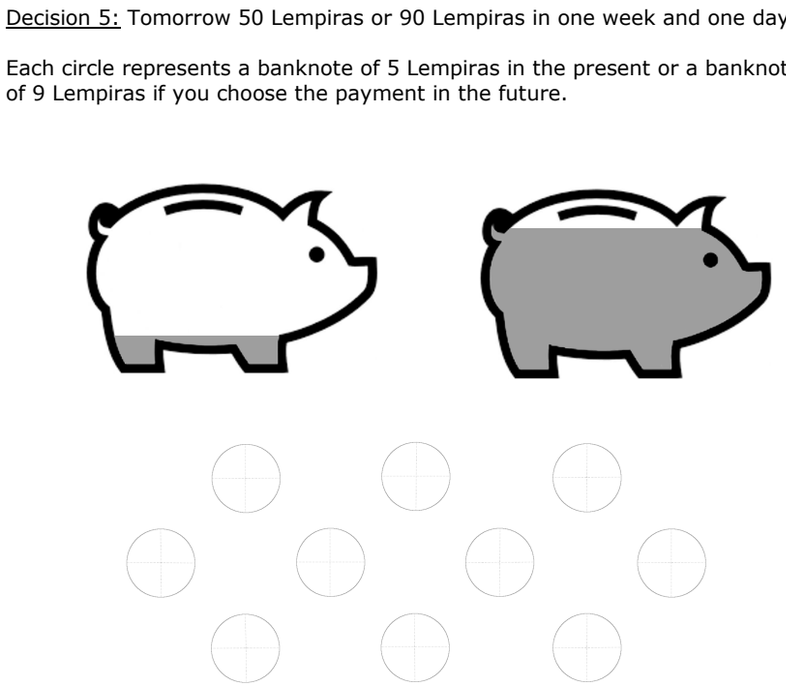
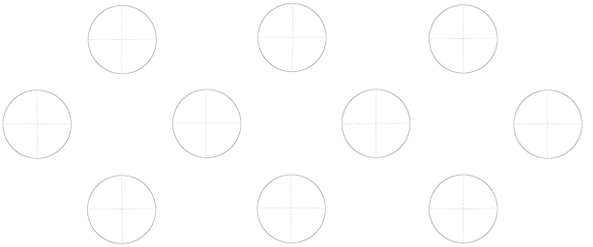


Figure A55: *10-coin task MPL-VCTP (Sheet 14)*

<u>Decision 6:</u> Tomorrow 50 Lempiras or 100 Lempiras in one week and one day.

Each circle represents a banknote of 5 Lempiras in the present or a banknote of 10 Lempiras if you choose the payment in the future.



Please write the **end time** :

..... Hours ..... Minutes ..... Seconds

B.6. 10-coin task VCTP-MPL

Figure A56: *10-coin task VCTP-MPL (Sheet 1)*

Block C

Rule :

You can use **EACH** colors in each one of the 6 scenarios

Please write the **start time** :

..... Hours ..... Minutes .....Seconds

Figure A57: *10-coin task VCTP-MPL (Sheet 2)*

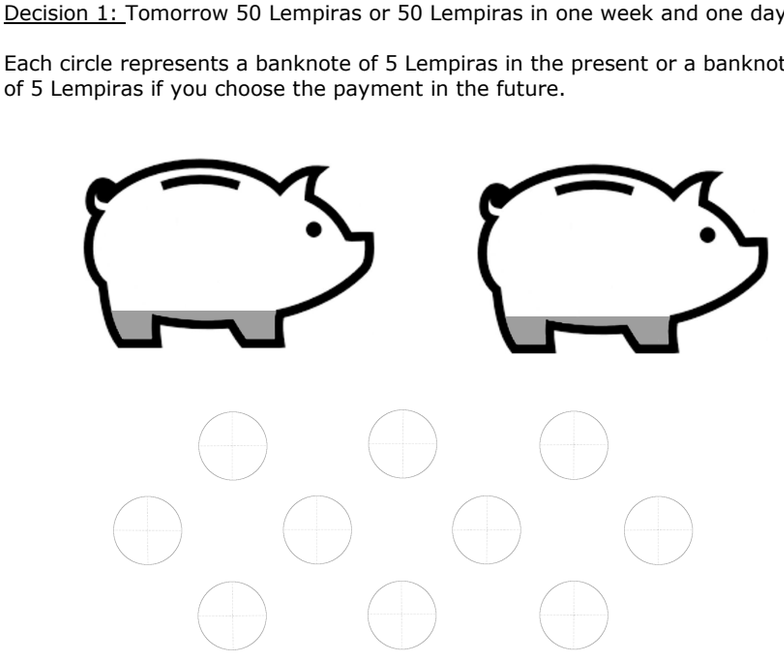


Figure A58: *10-coin task VCTP-MPL (Sheet 3)*

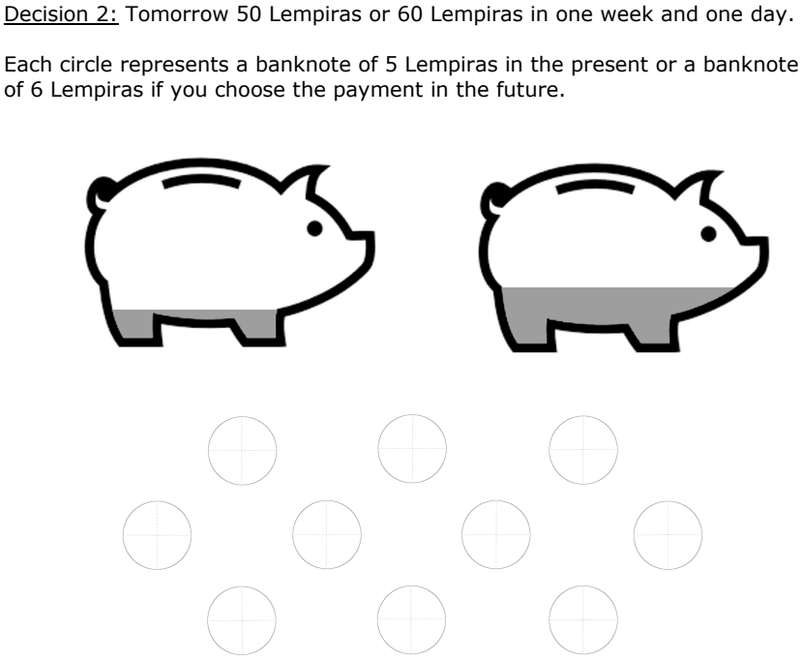


Figure A59: *10-coin task VCTP-MPL (Sheet 4)*

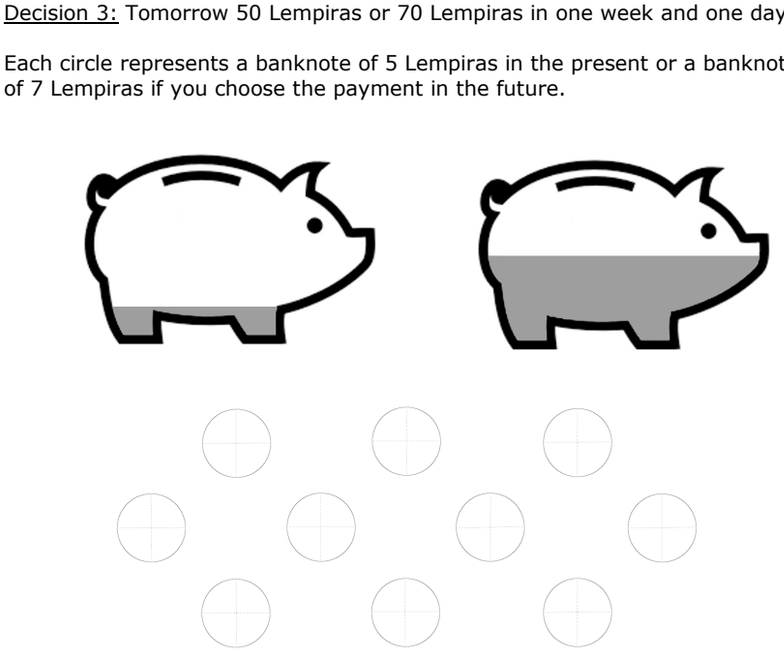


Figure A60: *10-coin task VCTP-MPL (Sheet 5)*

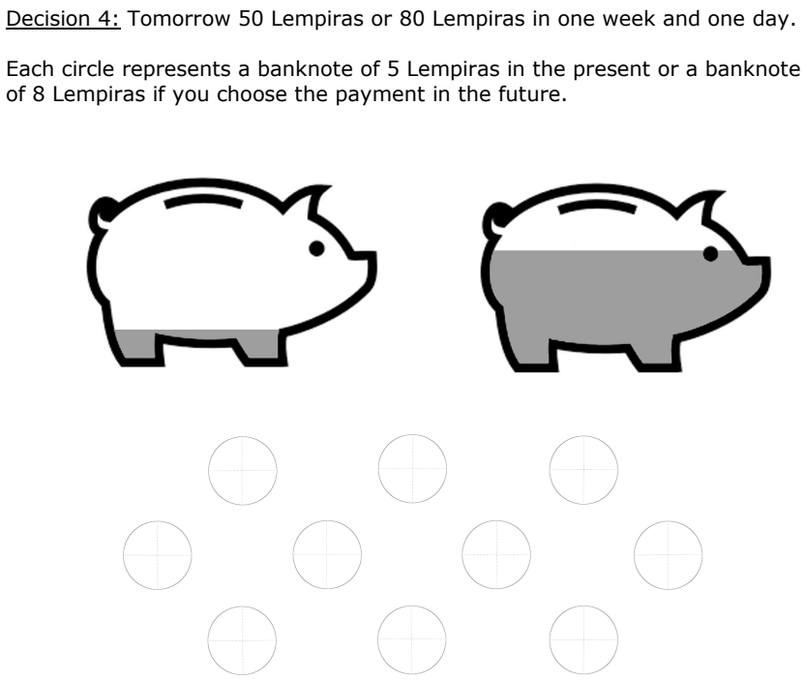


Figure A61: *10-coin task VCTP-MPL (Sheet 6)*

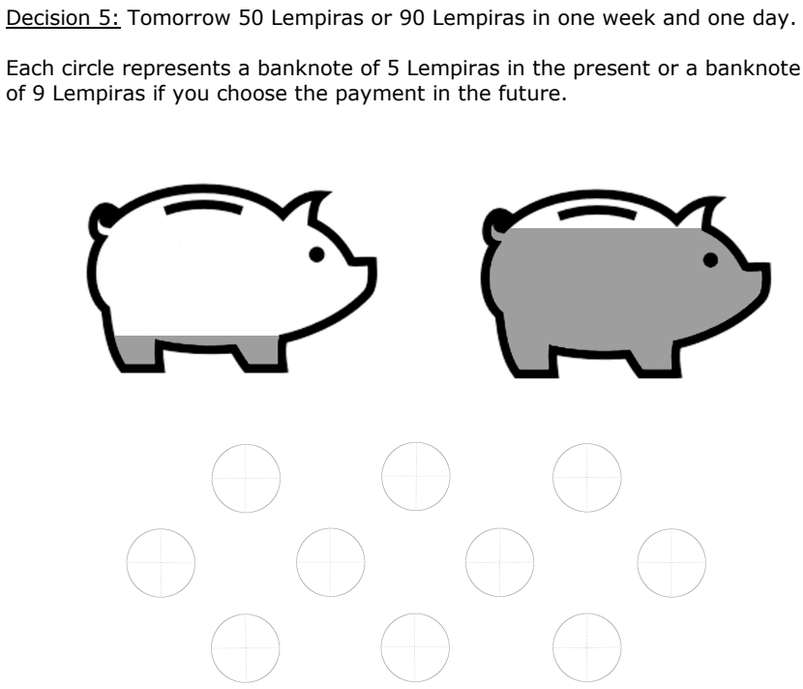
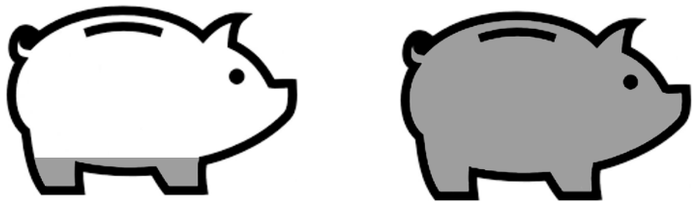
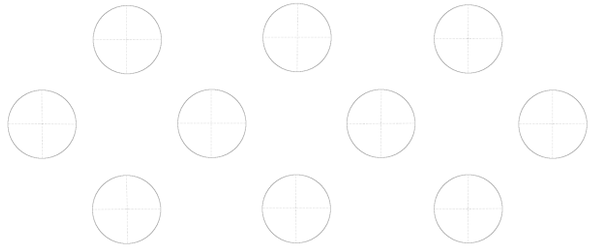


Figure A62: *10-coin task VCTP-MPL (Sheet 7)*

<u>Decision 6:</u> Tomorrow 50 Lempiras or 100 Lempiras in one week and one day.

Each circle represents a banknote of 5 Lempiras in the present or a banknote of 10 Lempiras if you choose the payment in the future.





Please write the **end time** :

..... Hours ..... Minutes ..... Seconds

Figure A63: *10-coin task VCTP-MPL (Sheet 8)*

Block M

Rule :

You can use **ONLY** one color in each one of the 6 scenarios

Please write the **start time** :

..... Hours ..... Minutes .....Seconds

Figure A64: *10-coin task VCTP-MPL (Sheet 9)*

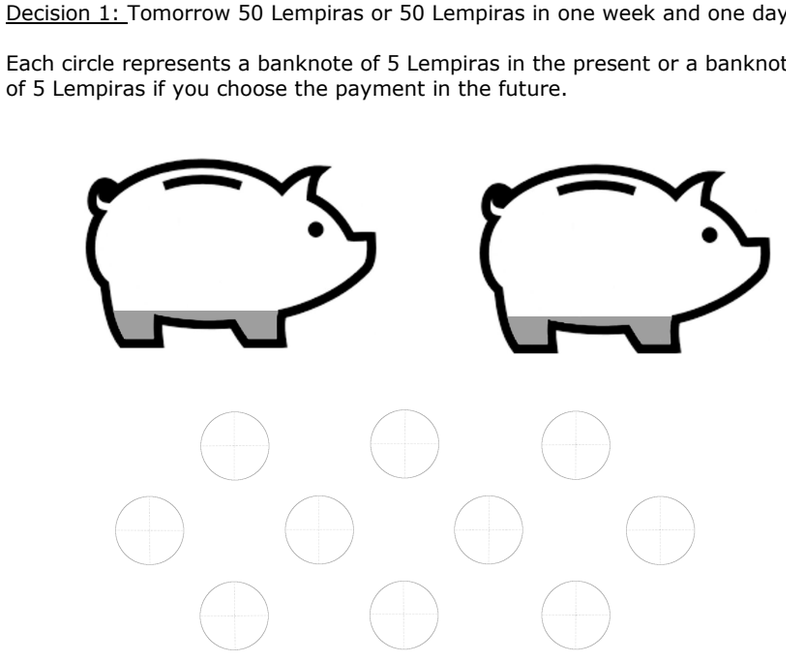


Figure A65: *10-coin task VCTP-MPL (Sheet 10)*

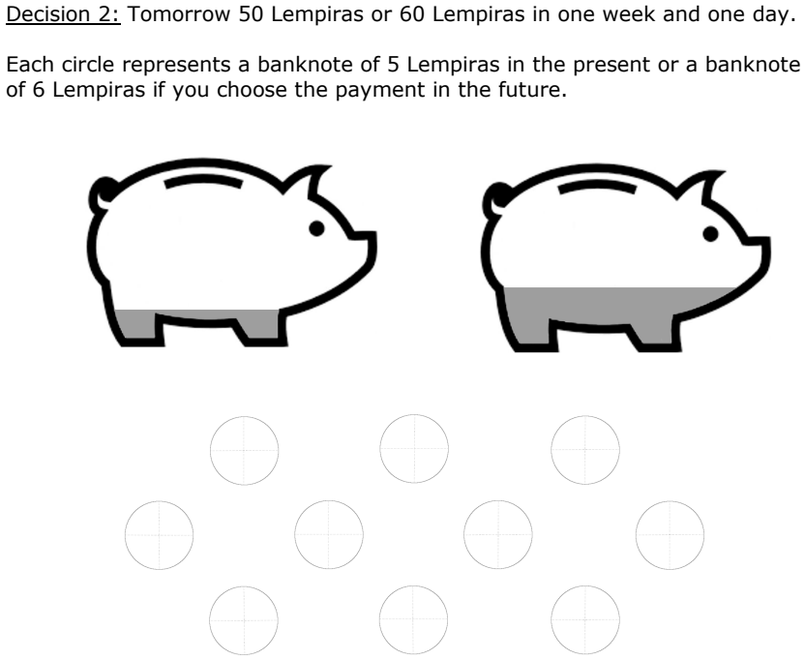


Figure A66: *10-coin task VCTP-MPL (Sheet 11)*

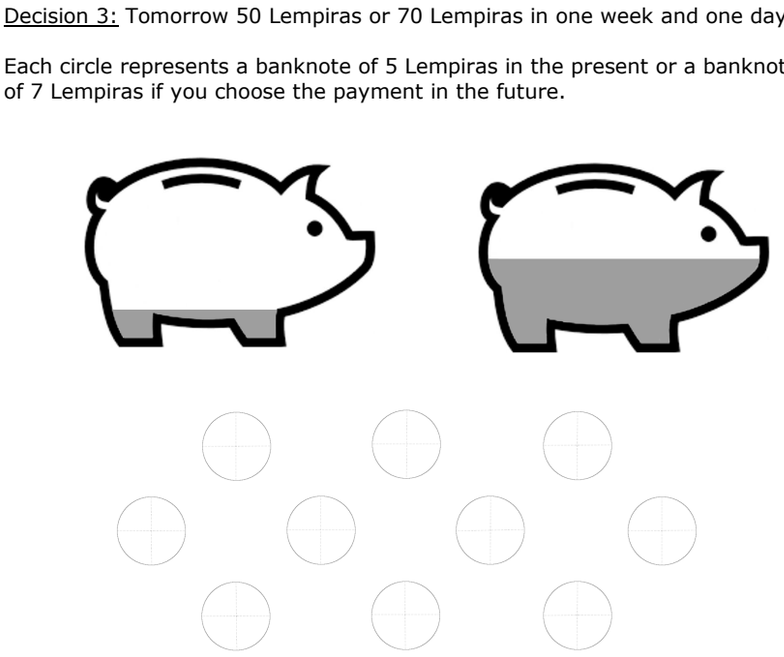


Figure A67: *10-coin task VCTP-MPL (Sheet 12)*

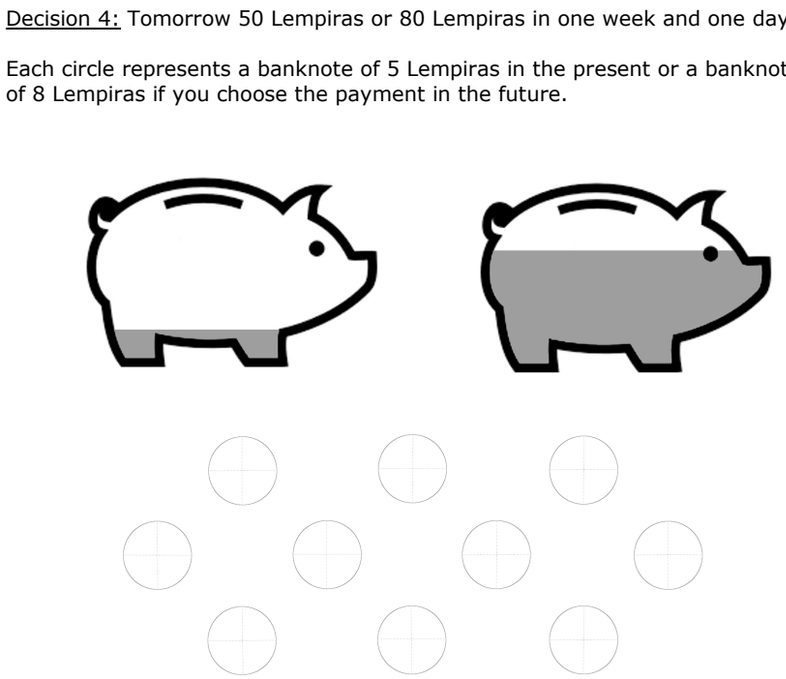


Figure A68: *10-coin task VCTP-MPL (Sheet 13)*

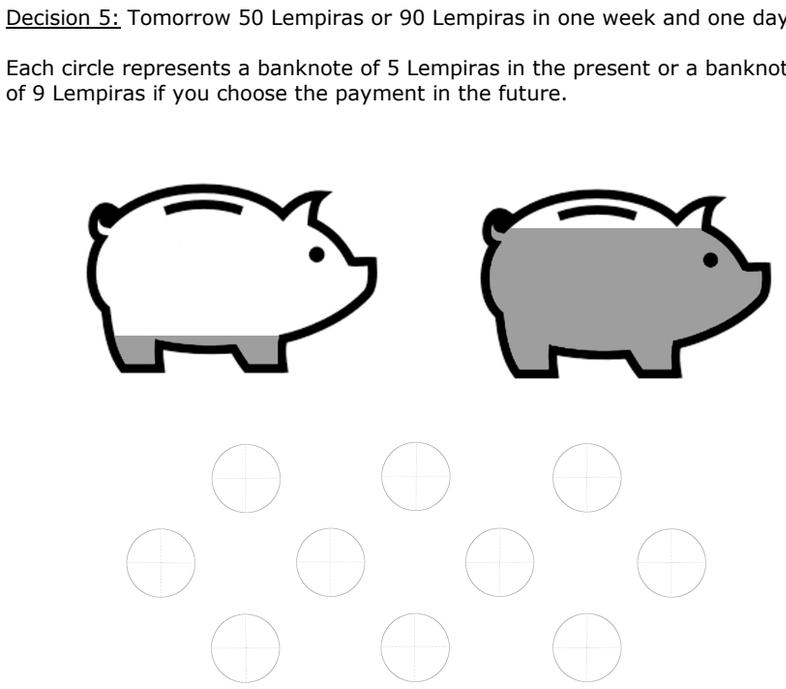
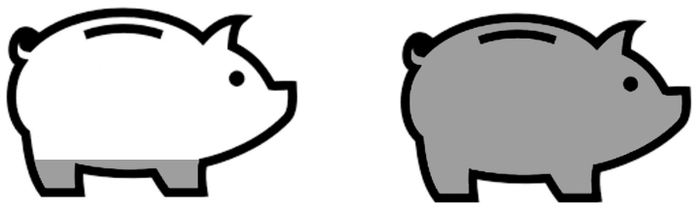
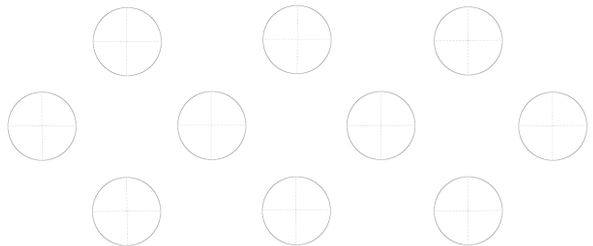


Figure A69: *10-coin task VCTP-MPL (Sheet 14)*

<u>Decision 6:</u> Tomorrow 50 Lempiras or 100 Lempiras in one week and one day.

Each circle represents a banknote of 5 Lempiras in the present or a banknote of 10 Lempiras if you choose the payment in the future.





Please write the **end time** :

..... Hours ..... Minutes ..... Seconds