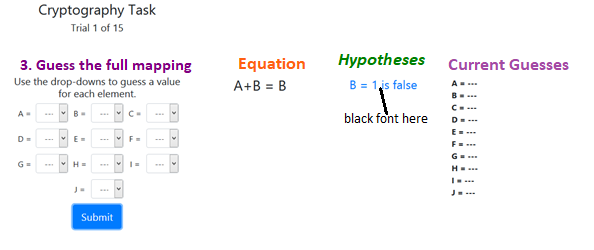
### Cryptography

### Small thing: why is the font for cryptography smaller? Suggest going for consistency (and make headings, e.g. “Review” all the same size/color).

### 

* Color coding
* It would help to add some color cues for the three different elements. For example: make “Equation” dark orange; “Hypothesis” dark green; and “Guess the mapping” dark purple. Then, in the display, repeat these colors as a way of reminding people of which element there are doing in a given trial.
* Other comments on the display
* Try to make the display flow like each trial does.
* How about a field on the left for people to work through the different parts of the trials, and then the three pieces: equation; hypotheses; current guesses [to reflect the order of the trial]



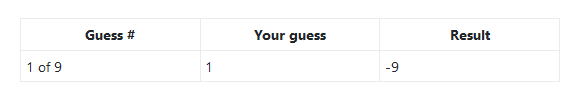
### Optimization Task

* Need to make it clear how many times people will be doing the optimization task.
* Include a “back to instructions” button [I found I lost track at some point]. Solution: have a pop-up where people can get the instructions [without losing the guesses]
* **I was able to click the “submit” button without actually putting a number in.** Make it so that to continue on, people have to guess a number between 0 and 300.
* After the final (e.g. 9th) guess, we need people to be able to see all 9 guesses. Have a popup that says

“Your next guess is your final answer. Based on your previous 9 guesses, type the number that you think will result in the biggest value”.

Then people return to the main screen, the text at the top is changed to say something like “Final Answer” and then they just enter their best guess.

* In the instructions, remove the square brackets from the numbers, e.g. “You will have [9] guesses”.
* Small but useful detail: center the numbers in the guessing table [i.e. this table]



### Add a Practice round for optimization!

### Optimization practice

### Text:

### “Let’s start with a quick practice. Say the underlying relationship [which you won’t know] looks like this

### 

### [note this is function A]

### For example, if you look at the graph you can see that when you enter the number 50, the output will be close to 100. From the graph, you can also see that you will get the biggest output when you enter 240. Last, if you enter a number close to 140 the computer will give you a negative number.

### Practice: enter a number between 0 and 300…[use Function A]

### Try inputting another number between 0 and 300.

### Click Next to continue

### NEXT PAGE “Now, you will do the optimization task 4 separate times. Each time, there will be a different underlying relationship. Each time, you will have 9 guesses to try to find a number that gives you a big value in return.”

### Overall notes on the optimization task

### Have “introduction” and “practice” pages.

### Then, have functionality to be able to choose which functions people see (e.g. Function D, E, G, I]

### After people do the first function (e.g. function D) and submit an answer, they get page that lets them know how many tasks they have to go:

### “Optimization Task: 2 of 4 Now you will…

### Get rid of this page (that pops up between functions):

### 

### Score: make sure we don’t include the random component

### Memory

* I’m able to accidentally click through by hitting numbers (1,2 or 3) rather than clicking the “next” or “continue” buttons. Disable this!!!
* Hitting 1,2,3 also makes the word choices go through to next. I don’t think you want to do this.
* Sapphire is spelled incorrectly

### Data page

* Something strange is going on with final answers for Optimization...[need to double check]

### Group Cryptography Task

### Can we have this as an independent task? [i.e. we want people to be able to do the Group Cryptography without having to do the Individual version]

### On the first page, can we have the following instructions:

### ‘Cryptography’ Task [heading in bold] This is exactly the same as the ‘cryptography task’ you individually when you first came to the lab. Now, you will do this task *as a group.*

### You will just use one laptop for this task. Decide now which computer you will use, and click “Group Sign In” on that laptop. Feel free to close the other laptops, as you won’t be needing them until after the break. Note to Gabe: I’m going to make the Cryptography task the last task that a group does.

### Text

### Get rid of “This is a group task” at the start of the Cryptography Group Task.

### After people have hit “Group Sign In” the first paragraph should read:

### “As a reminder, the letters A-J have been randomly mapped to the numbers 0-9. The goal for your group is to decipher this mapping in the minimum number of "trials". You have 10 minutes, and 12 trials to find out which letter corresponds to each number”.

### Remember that a trial involves three steps:

### Propose an EQUATION: the group nominates the left-hand side of an equation, using letters, addition and subtraction: e.g. "A+B". The group then receives an answer, e.g. "A+B=EC"

### Propose a HYPOTHESIS: the group makes a guess as to one element of the mapping, e.g. "E=1". The group then gets confirmation about whether their guess is correct: e.g. "E=1 is TRUE"

### GUESS FULL MAPPING: at the end of each trial, the group guesses at the whole mapping. If you are correct, the task is complete. Otherwise a new trial begins. The group will have 0 trials to complete the task.

### Next page

### “Take a minute to discuss your strategy. Click continue when you’re ready to start the 10 minutes. Remember that there’s a clock in the top right corner that tells you how long you have left”

### Group Optimisation Task

### New text for the introduction page

### Group Optimization Task

### Now, we will do the optimization task as a group. Recall that the goal of this task is to try to find the number (between 0 and 300) that results in your computer returning the biggest possible value.

### *EACH MEMBER OF THE GROUP* will have [3] guesses, which you enter into your own laptop. A guess can be any number between [0] and [300].

### After you enter your guess, the computer will give you back a number.

### There is a systematic relationship between the number you guess, and the number you receive, but the relationship will be hard to understand. Every time you type in the same number, the number you receive will be similar (but there is some randomness).

### After everyone in your group has used their [3] guesses, the group needs to decide on a single best answer.

### ONE person needs to click “group sign in” and enter your answer.

### NB: ultimately, we will have groups do 3 optimizations.

### Need a page of instructions after “this is a group task”!

### Last, somewhere on the platform we need the following text, as per the licensing agreement [not something we need immediately].

### 