CS 61A Fall 2025

Getting Started

Discussion 0: August 27, 2025

Congratulations, you found the Discussion 0 worksheet!

To find your discussion room, check your email. Unless you opted for the mega section, you should have received an email with your discussion group number, location, and time. All discussion groups meet in person. There are multiple groups at a time in each discussion room, so when you arrive, find all the people with your same group number: that's your group!

Please start on Berkeley time, 10 minutes after the scheduled start time (12:40, 2:10, or 3:40). Feel free to introduce yourself to the rest of your group while you wait (and check that they really have the same group number as you do).

Important: Often, your TA will be leading discussions in multiple rooms simultaneously. If your TA isn't there yet, they are probably helping a student in another room. Just go ahead and start.

Part 1: Meet your group and learn their names [5 minutes]

Order yourselves by birthday: January 1 at the start and December 31 at the end. Then, on your turn, say your name and where you're from, then say the same information for each person who had a turn already, starting from the most recent turn. For example, the intros might go:

- **Eva**: I'm Eva from Minneapolis
- **Lem**: I'm Lem from San Diego, and [turning to Eva] you're Eva from Minneapolis
- **Alyssa**: I'm Alyssa from Sacramento, [turning to Lem] you're Lem from San Diego, and [turning to Eva] you're Eva from Minneapolis.

If you forget someone's name or where they're from, that's fine; everybody is here to learn. When it's someone's turn, give them time to try themselves, but if they need help, offer it.

Tip: Now is a great time to write down the names of the people in your group so that you can look them up later. You could even put their birthdays in your calendar just in case they become your friends.

Part 2: Learn about each other [30 minutes]

Here's a game called partitions. Each round, you will split your group into two halves with equal numbers of people (or differing by 1 if there are an odd number of people). The goal is for both groups to find a rare fact that all of their members have in common, that no one in the other group also has in common. For example, Group A may find that they are all left-handed, while Group B may find that they all collect Pokémon cards. For each round follow these steps:

- Step 1: Split into two equal halves (or differing by 1).
- Step 2: The two groups separate for 10 minutes to talk and find some rare fact about them that they all share.
- Step 3: After 10 minutes, regroup and have each group give their shared fact. If no one in the opposing group has that fact in common as well, then everyone in your group scores a point. (So in the above example, if Group A's fact is that they're all left-handed, and no one in Group B is left-handed, everyone in Group A scores a point.)

Play for 2 rounds using 2 different ways of splitting your group into halves.

Important: The facts you choose *cannot* be determined by sight (such as height or hair color). They also *cannot* be based on preferences (such as favorite TV show). Some ideas: * Places you've been: Paris, Disneyland, In-N-Out * Things you've tried: zip-lining, meditation, fishing * Stuff you can do: ski, crochet, juggle, recite digits of pi

When you're done, it's time for the final challenge! Find a fact that's true about all of you but you don't think is true of your TA. When you're ready, check with your TA to see if you succeeded.

Part 3: Solve a problem together [30 minutes]

Imagine you can call only the following three functions: - `f(x)`: Subtracts one from an integer `x`. For example, `f(5)` is 4. - `g(x)`: Adds one and then doubles an integer `x`. For example, `g(5)` is 12. - `h(x, y)`: Concatenates the digits of two different positive integers `x` and `y`. For example, `h(789, 12)` evaluates to `78912` and `h(12, 789)` evaluates to `12789`.

Definition: A *small expression* is a call expression that contains only `f`, `g`, `h`, the number 5, and parentheses. All of these can be repeated. For example, `h(g(5), f(f(5)))` is a small expression that evaluates to 123.

What's the shortest *small expression* you can find that evaluates to 2025?

Part 4: Departure [5 minutes]

Take a group selfie and share it around. You'll be glad you did at the end of the semester.

Everyone will get attendance credit for Discussion 0, even those who don't manage to attend (for example, because you joined the class late or aren't enrolled in a discussion that fits your schedule). In future discussions, we'll take attendance.

You're done! If you have extra time, discuss how you might use a computer to find the shortest possible *small expression* that evaluates to 2025. We'll talk about this in Lecture 2.