

LCS-ES Group Meeting #1

Exercise 1: Algorithms

An algorithm is a description of how to do something. Some descriptions are more formal than others and most assume some background knowledge (called domain knowledge in computer science). Here is an algorithm for making (yummy) *Toll House Cookies*.

- Preheat the oven to 375 degrees.
- Cream 0.5 lb butter, 3/4 Cup Granulated Sugar, 3/4 Cup Dark Brown Sugar until light and fluffy.
- Beat in 2 eggs and 1 tsp vanilla.
- Stir 2.25 cups flour and 1 tsp baking soda together in a separate bowl.
- Stir the flour mixture into the butter mixture.
- Stir in 12 oz chocolate chips.
- Drop the batter by the spoonful onto ungreased cookie sheets.
- Bake for 6 to 8 minutes.
- Cool on wire racks.

What domain knowledge do you think is needed to carry out the steps of this algorithms? For example, 375 degrees, Celsius, Fahrenheit, or Kelvin?

Now that you have thought about one algorithm, split up into groups of 2 or 3 explain to someone how to make a peanut butter and jelly sandwich. Try to write the algorithm as formally as your can and make as few domain assumptions as possible. We will try out each your algorithm in a few minutes. Good Luck!

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Space for PB&J Algorithm