

PROBLEM 1 (TEST THE HEURISTICS) Here are four possible heuristics you could use:

- **Fewest Similar Pairs:** For each cone, see how many times each of its flavors appear in a similar pair and add those values up. Sort the cones from smallest to largest on this value, and take them in order.
- **Most Similar Pairs:** Same thing as above, but sorting the cones from largest to smallest on this value.
- **Rarest Flavors First:** For each cone, see how many times each of its flavors can be used in a cone, and add those values up. Sort the cones from smallest to largest on this value, and take them in order.
- **Cheapest Cone:** At each step, look at all the possible cones to add, and take the one that raises total similarity the least.

In the explorer, there are five different problem instances. For each, try all four heuristics and return the score. Then, circle the values that are not the highest for the input. For instance 1, the page will step you through the heuristic for each instance.

Instance	Fewest Similar Pairs	Most Similar Pairs	Rarest Flavors First	Cheapest Cone
1				
2				
3				
4				
5				

PROBLEM 2 (CREATE YOUR OWN!) In the final page of the explorer, you can create your own instance. Try to create instances with the following properties:

- Build an instance with more than one best menu.
- Build an instance where the menu with the most cones is not the best menu.
- Select a heuristic of your own. Then, build an instance that breaks it.