

# Caltech Math Circle

Third grade group

November 7, 2023

## PLANAR GRAPHS

**Problem 1.** The two Pokemon trainers, Ash and Misty, gotta catch 'em all. Can we connect each trainer to each Pokemon with a curve that doesn't go through another character and doesn't require lifting the writing implement?



**Problem 2.** Brock also has gotta catch 'em all. Can we connect each trainer to each Pokemon with a curve that doesn't go through another character and doesn't require lifting the writing implement?



#### GRAPHS ON OTHER SURFACES

**Problem 3.** The trainers and Pokemon have been placed on a beach ball. Can we perform the procedure on the beach ball?

**Problem 4.** The trainers and Pokemon have been placed on an inner tube. Can we perform the procedure on the inner tube?