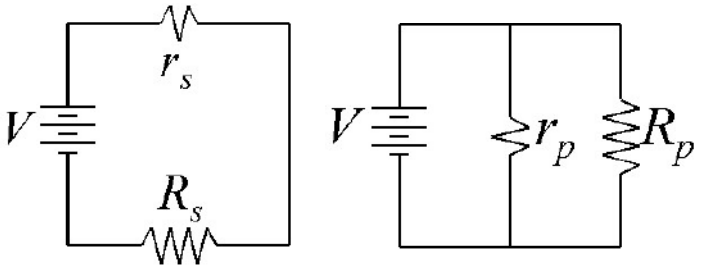
NAME _____ DATE _____

Scenario

The diagram shows four resistors R_p, R_s, r_p, and r_s that are connected to identical ideal batteries. The resistances are such that $R_p = R_s > r_p = r_s$.



Series Circuit Parallel Circuit

PART A: Rank the currents passing through each resistor from greatest to least. (Include <, >, or = to clarify your ranking.)

_____ _____ _____ _____
Greatest Current Least Current

PART B: Rank the potential differences across each resistor from greatest to least. (Include <, >, or = to clarify your ranking.)

_____ _____ _____ _____
Greatest Potential Least Potential

PART C: In a clear, coherent paragraph-length response, explain the reasoning for your rankings. Be sure to cite appropriate physical principles.