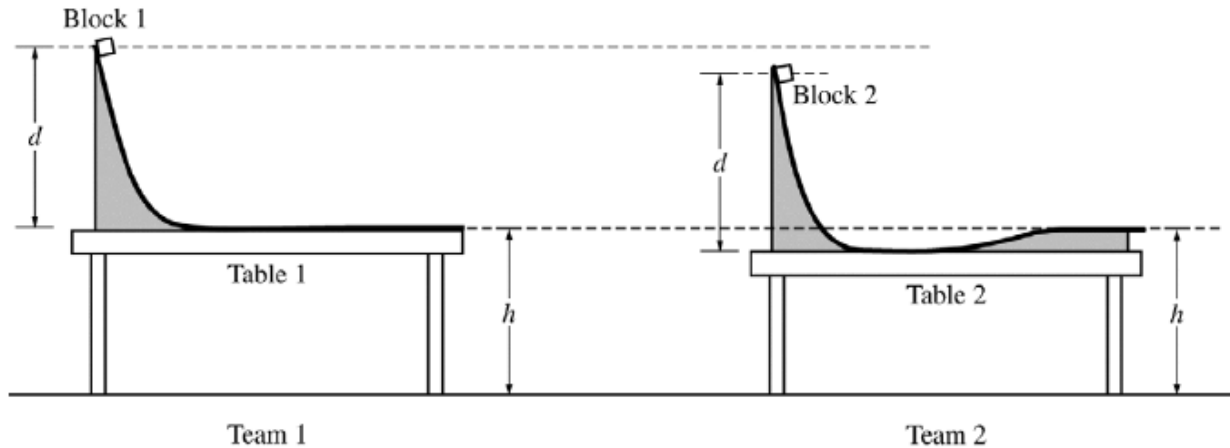**Problem 17-4:** Consider the low-friction slide launches shown below. A block will be placed at the top of each and released from rest. The slides are identical starting *d* units above each tabletop. As Table 2 is physically lower than Table 1, a rise is constructed so the a block leaving that table will leave at the same height h for both cases.

a.) If both blocks are released from rest, will the blocks leave their respective tables and land the same distance out on the floor. Justify your response without deriving mathematical relationships.

b.) In a second experiment, low friction slides with the same height are used again but with different shapes.
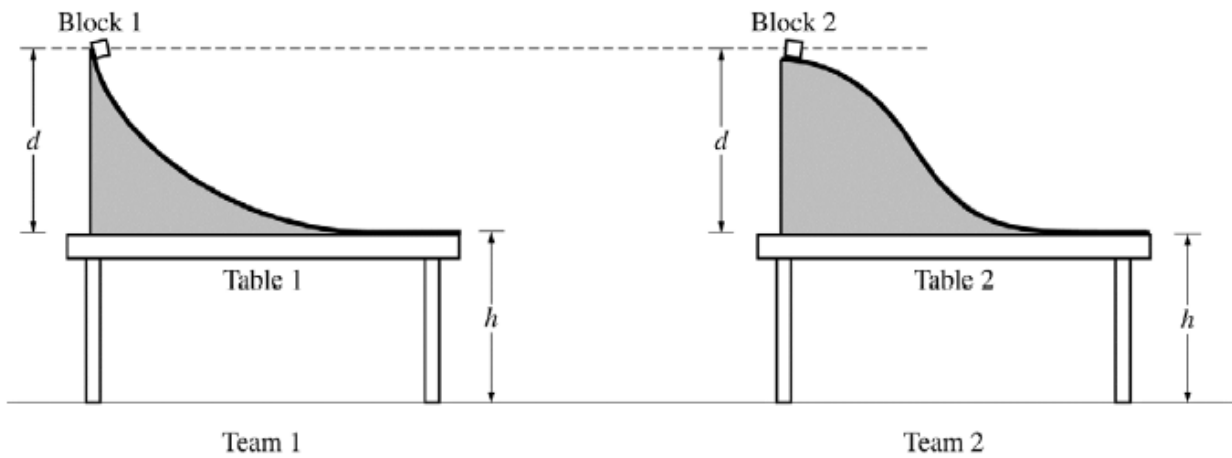
i.) Which block, if either, lands farther from its respective table? Briefly explain your reasoning without manipulating equations.

ii.) Which block, if either, hits the floor first? Briefly explain your reasoning without manipulating equations.

iii.) Assume now that both slides are frictional with the same coefficient of friction. Explain why it might be difficult to predict without doing the math which block will be moving the fastest at the bottom of their respective slides?

iv.) Let's assume the curvature of the ramp on table 1 is actually a quarter circle, and some enterprising soul decides to calculate how much work friction does the mass as it moves from rest to the bottom of that ramp. Explain how she would go about doing that?