Block A is placed on the ramp at $s = 0$ and is released from rest at $t = 0$. On the top part of the slope, there is no friction between the ramp and the block. However, part way down the ramp, there is friction which causes the block to slow down and stop. The stopping location is indiced by one of the dashed boxes in the figure.

When the experiment is repeated on Block B, it comes to a stop higher up on the hill, indicated by the other dashed box. You may assume that both boxes have the same mass.

1. On the axes below, sketch plots of $s(t)$, $\dot{s}(t)$, and $\ddot{s}(t)$ as functions of time for both blocks. Plots for both blocks should appear on the same set of axes. Your plots should start at $t = 0$ and continue until a time just after the time that Block A stops.

2. Draw a Free Body Diagram of Block A, shortly after it stops.