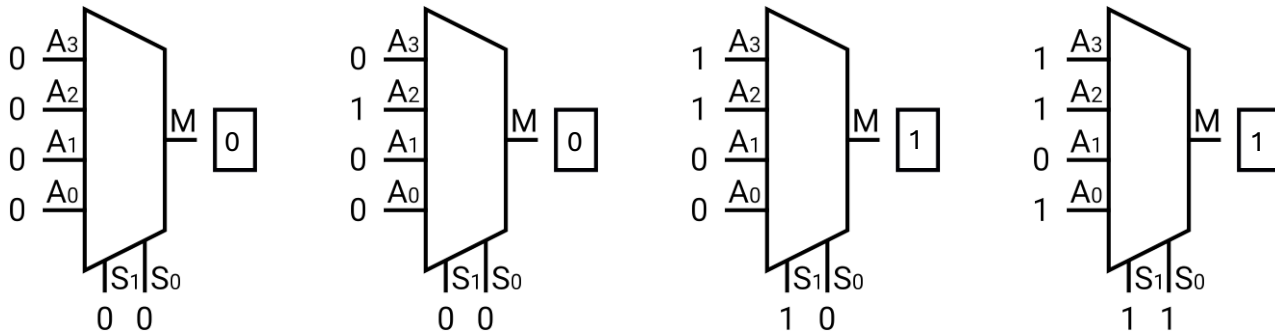


a) Determine the requested output(s) of each device (the empty boxes), given the specified inputs.

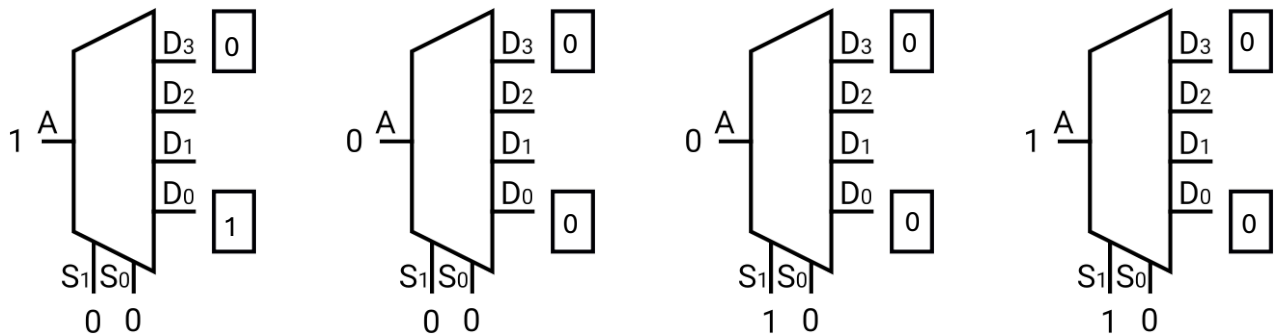
Each of these should take you no more than about 15 seconds. If it's taking longer, you should stop and think about how you (the human) should think about the behavior of these devices.

a-1)



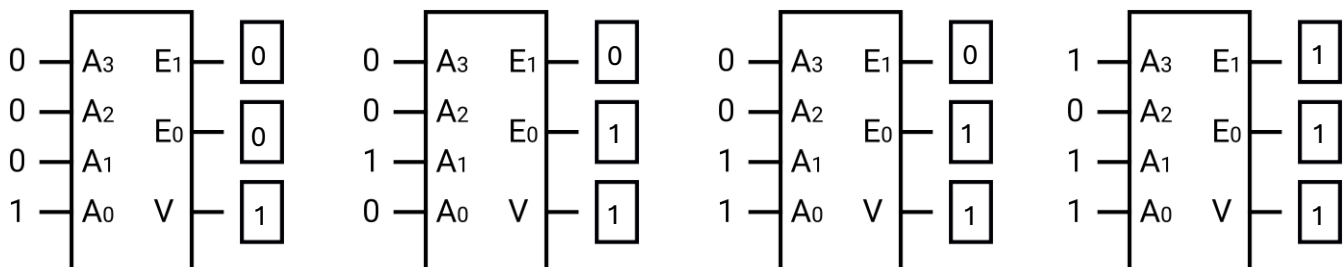
a-2)

The following are digital demuxes (i.e. no pass gates involved). Fill in outputs D₃ and D₀ for each.



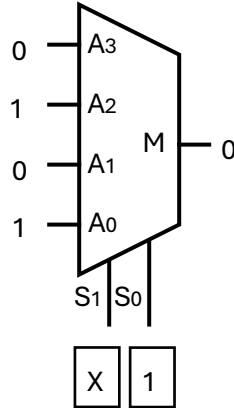
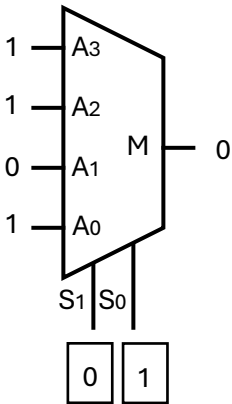
a-3)

The following are priority encoders (with 'valid' outputs) with priority A₃ highest and A₀ lowest.



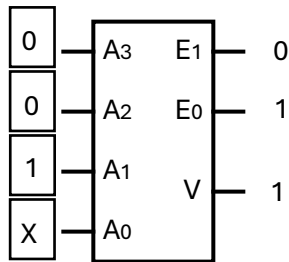
b) Fill in the missing values that will produce the given output. If there are multiple values that would work, list them all.

b-1)

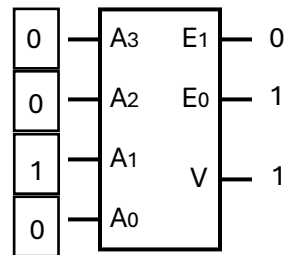


b-2)

(encoder with priority A₃ → A₀)



(encoder with **unknown** priority)



b-3)

