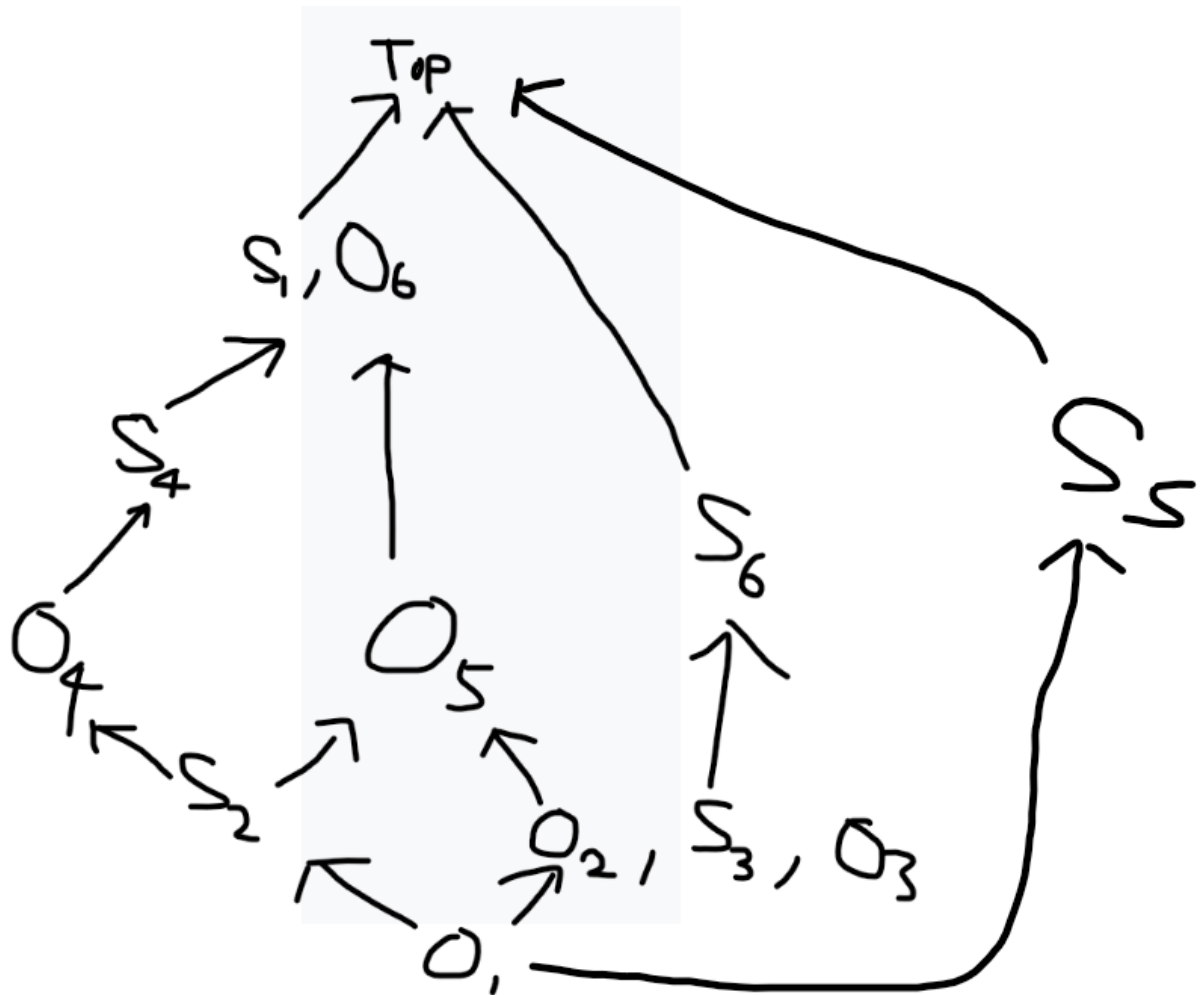1)
26 * 26 * 10^2 * 52^2 * 6^3 = 39482726400 possible combinations
entropy = 1 * (lg_{10}39482726400 / lg_{10}2)
         = 35.20 bits

2)

3)

	trees	apples	fences	flags	waves
Alice	Climb	Eat			
Bob		Eat	Climb	Wave	
Carol				Wave	Jump
trees		Hurt			