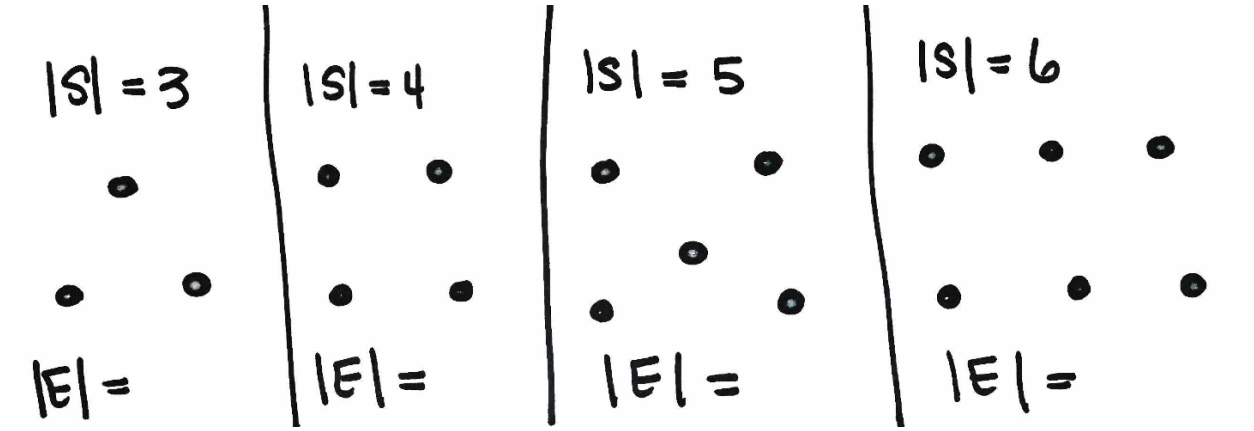
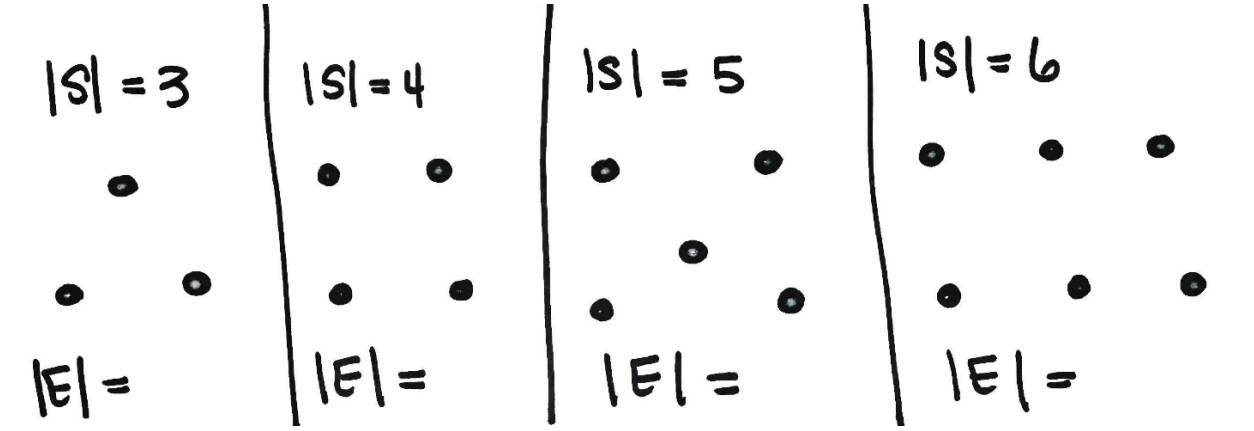
Lesson 12b – Route Splitting

How many edges must we include among $|S|$ vertices in order to have C connected components and NO CYCLES? Let's try some test cases...

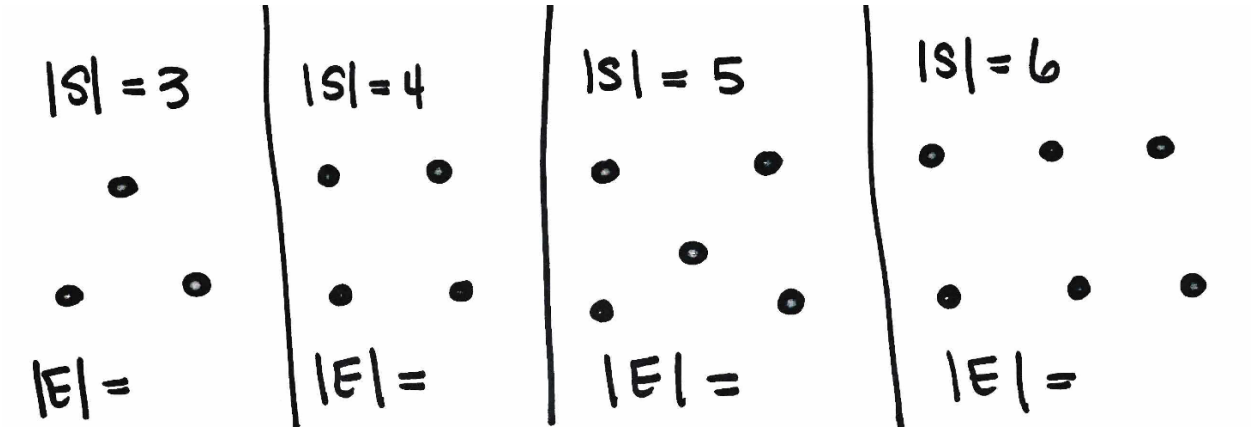
$C = 1$: How many edges must we include in order to have 1 connected component and no cycles?



$C = 2$: How many edges must we include in order to have 2 connected component and no cycles?



$C = 3$: How many edges must we include in order to have 3 connected component and no cycles?



General $C > 0$: How many edges must we include among $|S|$ vertices in order to have C connected components and NO CYCLES?