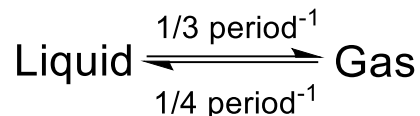


Activity 1

Example 1:

If we have the reaction:



For the first time point, $24/3 = 8$ "Liquid" molecules will move to the "Gas" cup, $0/4 = 0$ "Gas" molecules will move to the "Liquid" cup. At time point one you will thus have 16 "Liquid" molecules and 8 "Gas" Molecules. At time point two $16/3 = 5$ (always round down) "Liquid" molecules will to the "Gas" cup, and $8/4 = 2$ "Gas" molecules will move to the "Liquid" cup. At time point two you will have $(16 - 5 + 2) = 13$ "Liquid" molecules and $(8 + 5 - 2) = 11$ "Gas" molecules. The data in your chart should look like this:

Step	Liquid	Gas
0	24	0
1	16	8
2	13	11
3		
4		

Questions:

How many steps did it take for your system to reach equilibrium?

If you started with twice as many "water molecules", how many steps would it take to reach equilibrium? Why?

What does your graph look like when equilibrium is reached?

What is the relationship between the number of "molecules" in each cup at equilibrium and the number that move during each time point?
