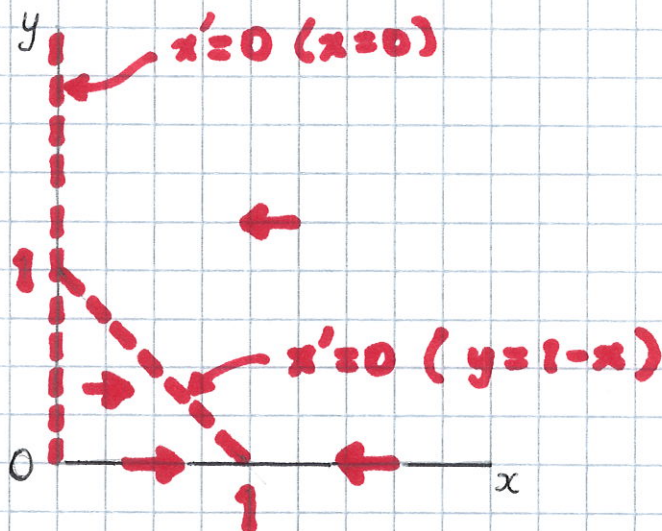
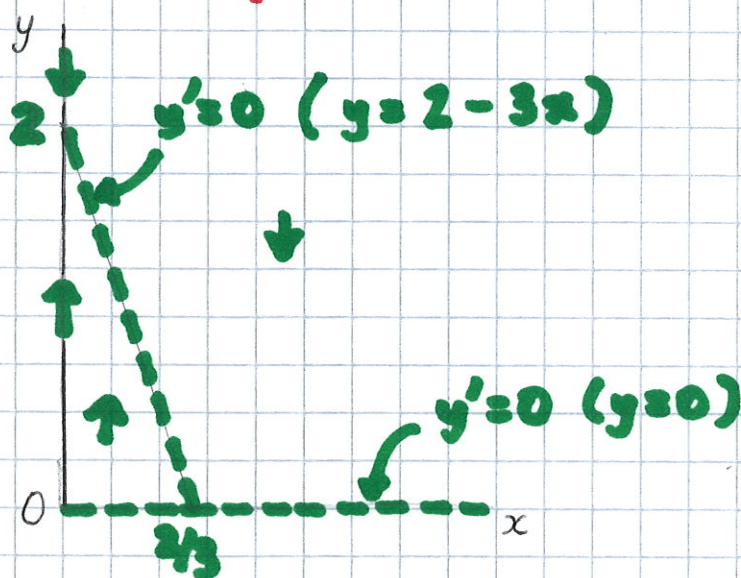
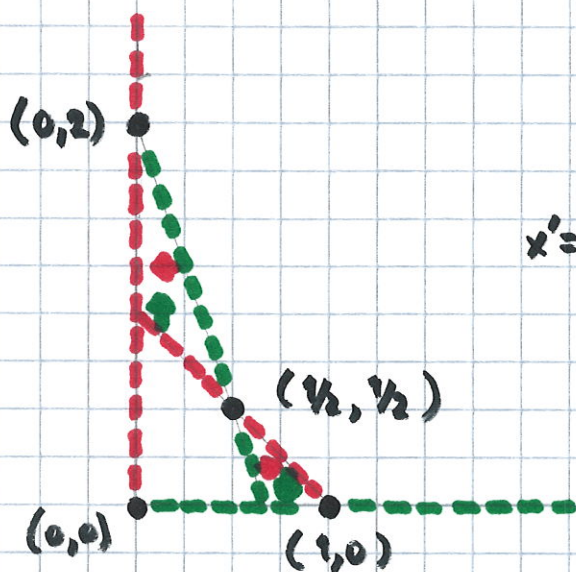


Sign of x' Sign of y' 

Both nullelines



Critical points at
intersections of
 $x'=0$ nulleline & $y'=0$ nulleline
(red) (green)

To save time, you can draw the phase portrait on top of the last picture.