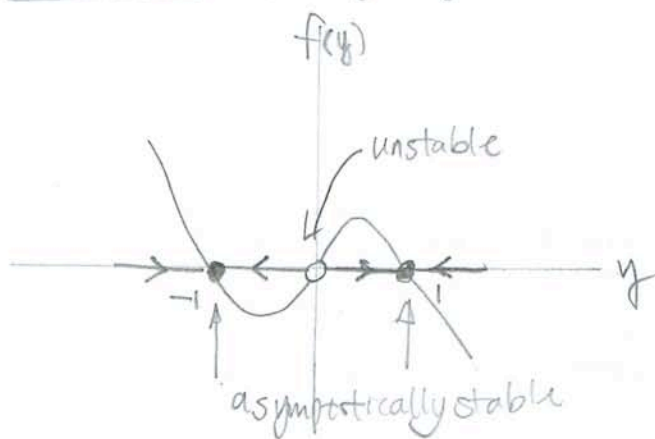


# Homework #3

2.5.10 |  $y' = y(1-y^2)$



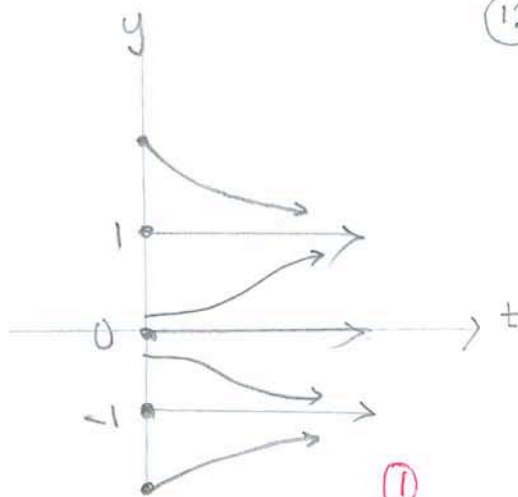
①

2.4: 3, 4, 5, 6, 11, 15

2.5: 3, 5, 10, 13

3.1: 3, 4, 10,

12, 22



①

3.1.12 |  $y'' + 3y' = 0$ ,  $y(0) = -2$ ,  $y'(0) = 3$

①/2  $\boxed{r^2 + 3r = 0}$   
 $r = 0, -3$

①/2  $\boxed{y = C_1 + C_2 e^{-3t}}$

$y(0) = -2$ :  $C_1 + C_2 = -2$

①/2  $\boxed{y' = -3C_2 e^{-3t}}$

$y'(0) = 3$ :  $-3C_2 = 3$

①/2  $\boxed{C_2 = -1}$

①/2  $\boxed{C_1 = -1}$

①/2  $\boxed{y = -1 - e^{-3t}}$

