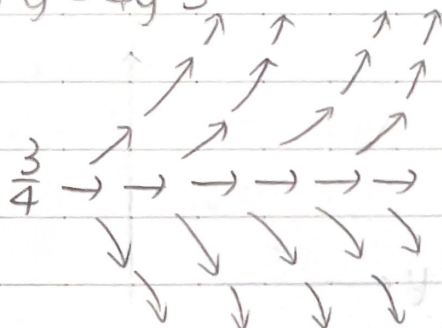


Part I

(1) $y' = 4y - 3$

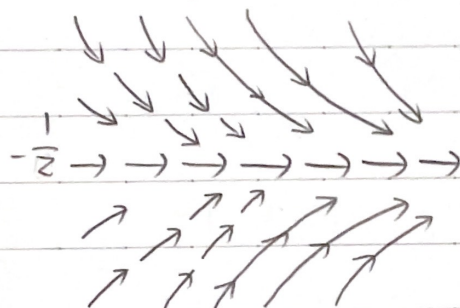


$4y - 3 = 0 \Rightarrow y = \frac{3}{4} \quad (y' = 0)$

$y > \frac{3}{4} \Rightarrow y' > 0$ [increase]

$y < \frac{3}{4} \Rightarrow y' < 0$ [decrease]

(2) $y' = -1 - 2y$



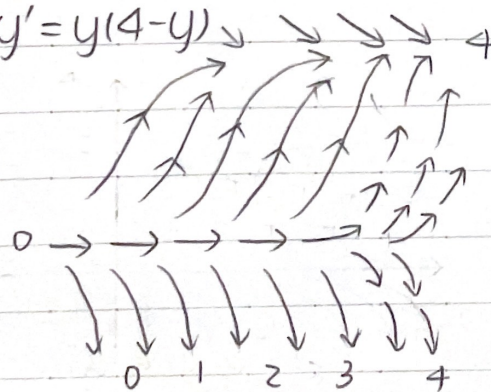
$-1 - 2y = 0 \Rightarrow y = -\frac{1}{2} \quad (y' = 0)$

$y > -\frac{1}{2} \Rightarrow y' < 0$ [decrease]

$y < -\frac{1}{2} \Rightarrow y' > 0$ [increase]

Part II

(1) $y' = y(4 - y)$



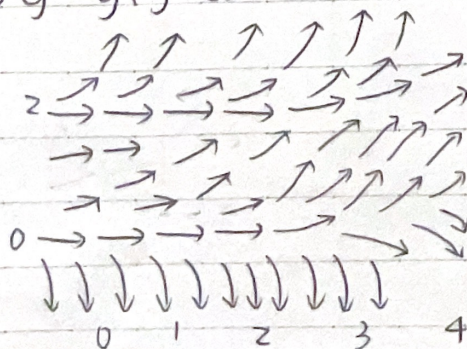
$y(4 - y) = 0 \Rightarrow y = 0 \text{ or } 4 \quad (y' = 0)$

$y < 0 \Rightarrow y' < 0$ [decrease]

$0 < y < 4 \Rightarrow y' > 0$ [increase]

$y > 4 \Rightarrow y' < 0$ [decrease]

(2) $y' = y(y - 2)^2$



$y(y - 2)^2 = 0 \Rightarrow y = 0 \text{ or } 2 \quad (y' = 0)$

$y < 0 \Rightarrow y' < 0$ [decrease]

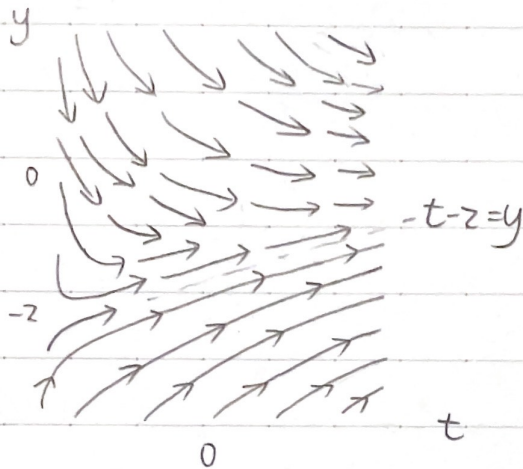
$0 < y < 2 \Rightarrow y' > 0$ [increase]

$y > 2 \Rightarrow y' > 0$ [increase]



Part III

$$(1) y' = -z + t - y$$



$$-z + t - y = 0 \Rightarrow y = t - z$$

$$y > t - z \Rightarrow y' > 0 \text{ [increase]}$$

$$y < t - z \Rightarrow y' < 0 \text{ [decrease]}$$