

Pages 35-36

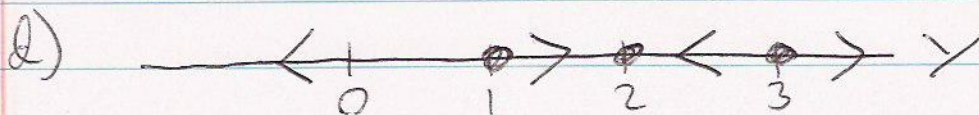
Terminology:

Stable equilibrium or attractor or sink: $\rightarrow \bullet \leftarrow$

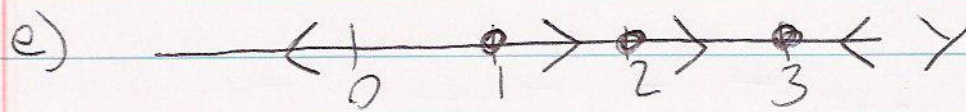
Unstable equilibria come in two types:

(1) Repeller or source: $\leftarrow \bullet \rightarrow$

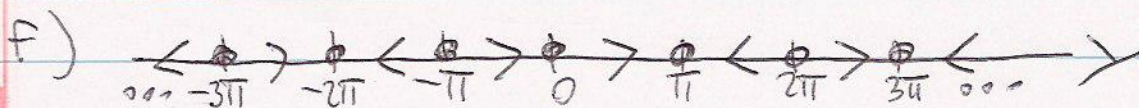
(2) What our text calls a node: $\rightarrow \bullet \rightarrow$ or $\leftarrow \bullet \leftarrow$



$y=1, 3$: source $y=2$: sink



If $y(0) = 2.01$, $y(t) \rightarrow 3$ as $t \rightarrow \infty$.



Sinks: $y = \pi, 3\pi, 5\pi, \dots$ and $-2\pi, -4\pi, -6\pi, \dots$

Sources: $y = 2\pi, 4\pi, 6\pi, \dots$ and $-\pi, -3\pi, -5\pi, \dots$

Node: $y = 0$