Josh whitehead
U1069343

Q 5.1

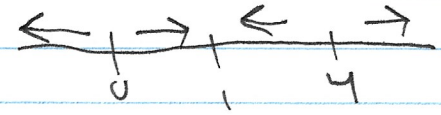
fp $\frac{dx}{dt} = x^3 - 5x^2 + 4x = 0$

$x(x^2 - 5x + 4) = 0$

$x^2 - 5x + 4 = (x-4)(x-1)$

$(x-4)(x-1) = 0$

$x = 0, 4, 1$

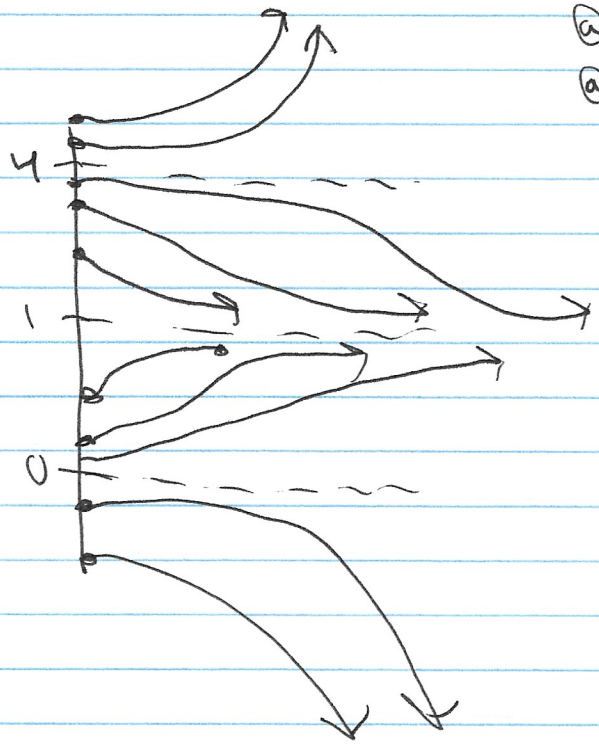


③ $-1: -1 - 5 - 4$ (−)

③ $\frac{1}{2}: \frac{1}{8} - \frac{5}{4} + 2 = \frac{-9}{8} + \frac{16}{8}$ (+)

③ $2: 8 - 20 + 8$ (−)

③ $5: 125 - 125 + 20$ (+)



$x = 0, x = 4$ Unstable

$x = 1$ Stable