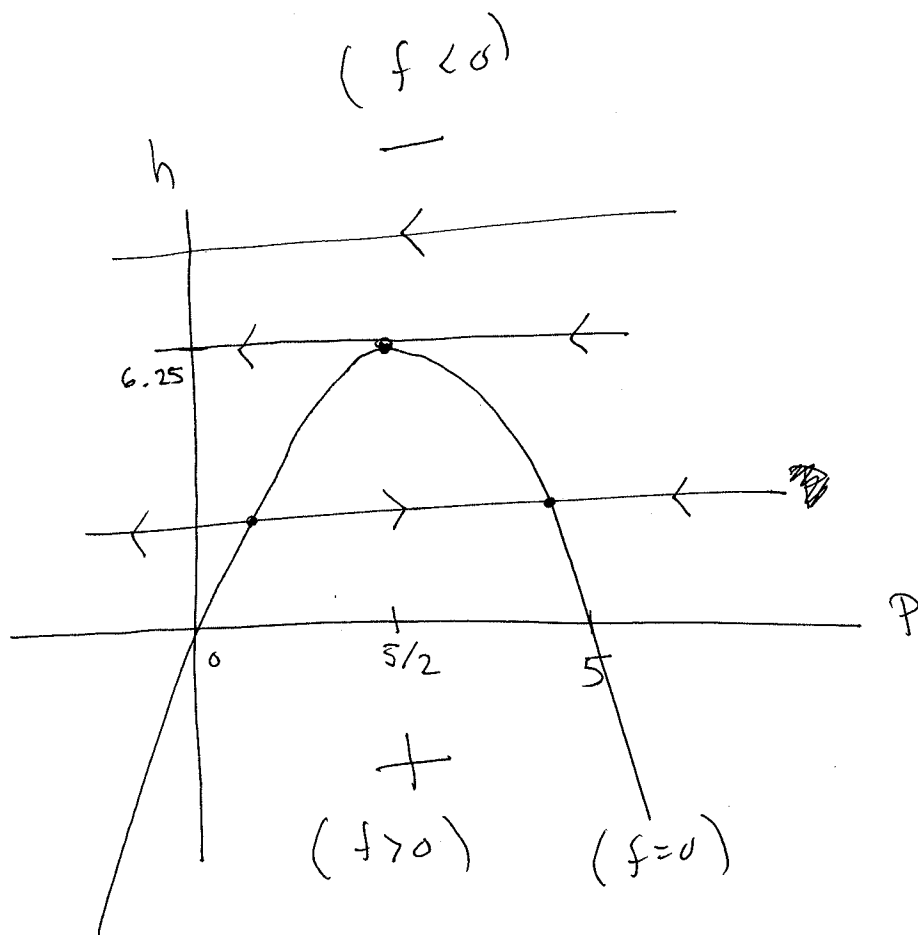


Written Assignment #3

1+2)



$$f = 0 \Leftrightarrow h = P(5 - P)$$

Since $\frac{dP}{dt} = f$, flow is to the right when $f > 0$
and to the left when $f < 0$

3)

Exceptional value of h is at vertex, so

$$h_0 = \frac{5}{2} \left(5 - \frac{5}{2}\right) = \frac{25}{4} = 6.25$$

When fishing rate exceeds 6.25 thousand fish/year, the population will eventually become extinct, no matter what the initial population is.