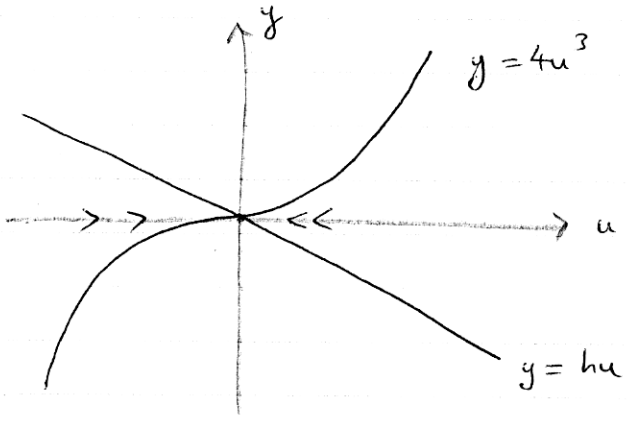
c) $u' = hu - 4u^3$.

Zeroes: $hu - 4u^3 = 0 \iff u(h - 4u^2) = 0$.

$u = 0$ or $u = \pm\sqrt{\frac{h}{4}}$.

$h < 0 \Rightarrow$ one critical point $u^* = 0$ STABLE



$h > 0 \Rightarrow$ three critical points $u^* = 0$ UNSTABLE

$u^* = \pm\sqrt{\frac{h}{4}}$. STABLE