

Problem Set 6

1. $0 = V - 0.01 \cdot V \cdot E$ $0 = 0.002 \cdot V \cdot E - E$
100. 500.
 $E^* = 100$ **$V^* = 500$**

2. Read assigned text.

3. $\frac{0.5}{0.001} = 500$ **501 > 500; Epidemic advances**

4. $dH = 0 = r \cdot H - \alpha \cdot H \cdot P - c \cdot H^2$ $dP = 0 = \alpha \cdot H \cdot P - m \cdot P$
 $dP = 0 = \alpha \cdot H - m$
 $\frac{m}{\alpha} = H^*$

Substitute H^* for H in dH

$$\frac{(r \cdot \alpha - c \cdot m)}{\alpha^2} = P^*$$