

Solutions

Each answer shows the steps, then the **result**.

2.1

- $L = 2000$

2.2

- 2000

2.3

- $P = 1000$ (i.e. $L/2$)

3.1 C

- fastest growth at the inflection point $P = \frac{L}{2}$

3.2

(a)

- 5000

(b)

- 5000

(c)

- 2500

3.3

- Decreases — $P(0) = 1500 > 1200 = L$, so $1 - \frac{P}{L} < 0$ and $\frac{dP}{dt} < 0$, pulling P down toward 1200