

Solutions

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

2.1

- $\% = \frac{\text{births} - \text{deaths}}{\text{population}} \times 100$

2.2

- $\frac{60 - 20}{2000} \times 100 = 2\%$

2.3

- J-shaped (exponential)

3.1 B

- an S-shaped (logistic) curve

3.2

(a)

- $(100 + 30) - (40 + 10) = 80$

(b)

- $\frac{80}{5000} \times 100 = 1.6\%$

3.3

- As the population nears carrying capacity, resources become limited and competition rises, so births fall and deaths rise, slowing growth