

Solutions

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

2.1

- J-shaped

2.2

- The maximum population the environment can support long-term

2.3

- S-shaped

3.1 B

- the carrying capacity

3.2

(a)

- 1200

(b)

- As the population grows, resources (food, space) become limited and competition rises, so births fall and deaths rise, slowing growth toward K

3.3

- Exponential growth assumes unlimited resources, so it keeps accelerating; logistic growth accounts for limited resources, so it slows and levels off at the carrying capacity