

Solutions

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

2.1

- any **two** of: large surface area / thin surface / good blood supply / good ventilation

2.2

- expired air contains **more carbon dioxide**

3.1 B

- when breathing in, the diaphragm **contracts and flattens**
- A is breathing out; C and D are false

3.2

(a)

- oxygen moves by **diffusion**

(b)

- millions of alveoli give a **large surface area**
- walls **one cell thick** / good blood supply, so exchange is fast

3.3

- bubble inspired and expired air through **separate tubes of limewater**
- expired air turns the limewater **cloudy faster** (more CO₂)