Solutions

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

2.1

- the disorder of a system (the number of microstates)

2.2

- the total entropy of an isolated system tends to increase

2.3

- that would **decrease** the total entropy, which the second law forbids without external work being done

3.1 C

3.2 B

3.3

(a)

- increases

(b)

- liquid water is more disordered than solid ice — its particles move more freely, so there are more microstates and higher entropy