

Solutions

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

2.1

- any two of: brain activity resembles waking; the eyes move rapidly; vivid dreaming occurs; skeletal muscles are effectively paralysed

2.2

- a roughly 24-hour biological cycle governing sleep, alertness and body temperature; set mainly by light

2.3

(a)

- poorer consolidation, so weaker recall of what was studied

(b)

- REM periods lengthen across the night, so the hours cut from the end of sleep contain proportionally more REM

3.1 C

- muscle atonia during vivid dreaming is a defining feature of REM

3.2 B

- the rhythm has adapted to the night schedule and is misaligned on days off

3.3

(a)

- narcolepsy

(b)

- onset is sudden and uncontrollable, often entering REM immediately, rather than gradual drowsiness