

Solutions

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

2.1

- the brain; the spinal cord

2.2

- somatic: carries sensory information and controls voluntary skeletal muscle; autonomic: controls involuntary processes such as heart rate or digestion

2.3

(a)

- the sympathetic branch

(b)

- any two of: heart rate rises; pupils dilate; digestion is suppressed; breathing quickens

3.1 B

- the parasympathetic branch restores the body after arousal

3.2 B

- hormones travel in the bloodstream to every tissue and act over a longer period

3.3

(a)

- the somatic nervous system

(b)

- a reflex arc is completed in the spinal cord, so the motor command is issued before the signal reaches the brain for conscious processing