

- 13** When a frictionless and well-insulated bicycle pump is used to pump up a tyre, the air in the tyre becomes hotter than the surrounding air.

Which statement best explains this observation?

- A** After compression the air molecules collide more frequently.
- B** Work is done on the air and since little thermal energy escapes the internal energy increases.
- C** The internal energy increases because thermal energy is supplied and work is done on the air.
- D** Thermal energy is supplied to the air during the pumping action but the internal energy remains unchanged.