

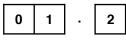
The picture below shows a sauna. A sauna is a room where the temperature is raised to levels well above normal room temperature.



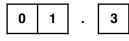
A man sits in a sauna and after a few minutes his body temperature begins to rise.



The brain has a role in detecting a rise in body temperature. Which part of the brain will detect this rise in temperature?

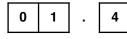


[1 mark] How does this part of the brain detect a rise in body temperature? [2 marks]



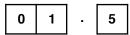
One response to higher temperatures is the skin becoming red. Explain why the skin may appear red when the body temperature rises.

[2 marks]



The man leaves the sauna and jumps into a cold swimming pool. He begins to shiver. Explain why he shivers.

[2 marks]



Alcohol dilates blood vessels in the skin. Suggest why it is dangerous to drink alcohol between going from sauna to swimming pool.

[2 marks]