Answer **all** the questions in the spaces provided.

1 A kettle is rated as 2.3 kW. A mass of 750 g of water at 20 °C is poured into the kettle. When the kettle is switched on, it takes 2.0 minutes for the water to start boiling. In a further 7.0 minutes, one half of the mass of water is boiled away.

(a) Estimate, for this water,

(i) the specific heat capacity,

specific heat capacity = ... $J\,kg^{-1}\,K^{-1}$

(ii) the specific latent heat of vaporisation.

specific latent heat = ... $J\,kg^{-1}$
[5]

(b) State **one** assumption made in your calculations, and explain whether this will lead to an overestimation or an underestimation of the value for the specific latent heat.

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.....[2]