3 A family has a television set.

(a) The television set has a low power mode called standby.

When on standby, the power rating of the television set is 0.27 W.

Calculate the energy transferred to the television set on standby in 12 hours.

(3)

energy transferred = ... J

(b) In normal use, the current in the television set is 0.31 A.

(i) Explain how a fuse works to protect the television set if there is a fault.

(3)

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(ii) Explain why a 13 A fuse is not an appropriate choice of fuse to use in the plug of this television set.

(2)

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(Total for Question 3 = 8 marks)