Oxford Cambridge and RSA

GCSE Chemistry B (Twenty First Century Science)

J258/03 Breadth in chemistry (Higher Tier)

Question Set 16

1 This question is about the efficiency of LED light-bulbs in 2015 compared to 2011.

The table shows part of a life-cycle assessment for the two light-bulbs.
The numbers in the table compare the energy used to give the same amount of light in a certain time.

Stage in life cycle	2011 light (MJ)	2015 light (MJ)
Manufacture	343	132
Transport	3	2
Use	3540	1630

(a) In total, 2015 LED lights use less energy than 2011 LED lights.

Calculate the percentage decrease in energy use at 'manufacture' stage from 2011 to 2015.

Give your answer to **2** significant figures.

Percentage decrease = ... % **[2]**

(b) The data in the table does not cover the whole life-cycle assessment.

Describe in detail the **final** stage of the life-cycle assessment. **[2]**

Total Marks for Question Set 16 : 4

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