

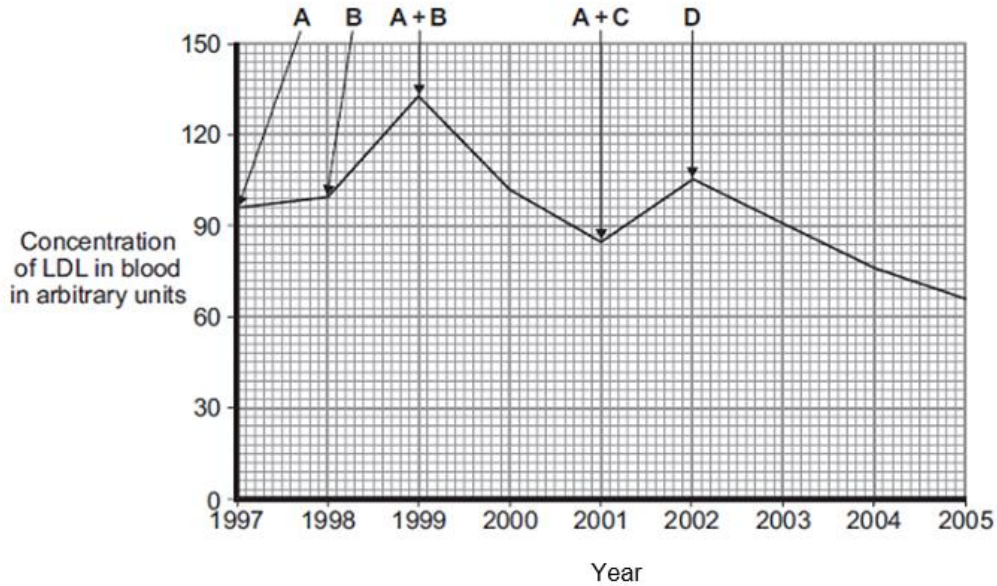
Q1.LDL is one form of cholesterol found in the blood.

People with a high concentration of LDL in their blood may be treated with drugs called statins.

A high concentration of LDL cholesterol in the blood may result in an increased risk of heart and circulatory diseases.

The graph shows the effects of the treatment of one person with four different statins, **A**, **B**, **C** and **D**, over a period of 8 years. The arrows show when each new treatment was started.

Each treatment was continued until the next treatment was started.



Compare the effectiveness of the five treatments in reducing the risk of heart and circulatory diseases for this person.

- (a) After the water has boiled, the temperature of the water decreases by 22 °C. The mass of water in the kettle is 0.50 kg. The specific heat capacity of water is 4200 J/kg °C.

Calculate the energy transferred to the surroundings from the water.

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Energy = joules

(2)

- (b) Why is the total energy input to the kettle higher than the energy used to heat the water?

Tick (✓) **one** box.

	Tick (✓)
Energy is absorbed from the surroundings.	
Energy is used to heat the kettle.	
The kettle is more than 100% efficient.	

(1)