**45*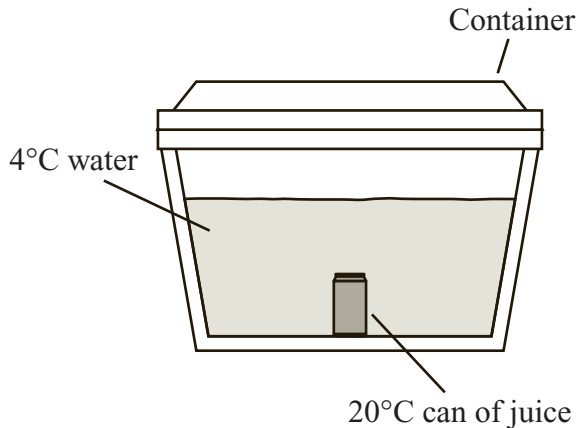* A can of juice at 20°C is completely submerged in a closed, insulated container filled with water at 4°C, as shown in the diagram below.

a. Describe what happens to the temperature of the can of juice **and** the temperature of the water in the container within the first few minutes after the can is submerged. Explain your answer.

b. After four hours, will the can and the water have the same temperature or different temperatures? Explain your answer.

c. Estimate the numerical value(s) of the final temperatures of the can of juice and the water after four hours. Explain your answer.