

7. A container holding 1.20 kg of water at 20.0°C is placed in a freezer which is kept at -20.0°C . The water freezes and comes to thermal equilibrium with the interior of the freezer. What is the minimum amount of electrical energy required by the refrigerator to do this if it operates between reservoirs at temperatures of 20.0°C and -20.0°C ?

A. 6.32 kJ

B. 8.73 kJ

C. 87.1 kJ

D. 348 kJ

E. 549 kJ

F. Not close to any of the above

Ans. _____