13 The specific latent heat of fusion of water is 3.34×10^5 J kg^{-1}. A mass of 1.00 kg of ice at its melting point melts completely.

Which change, if any, occurs in the sums of the randomly distributed kinetic and potential energies of the water molecules?

	Kinetic Energy	Potential Energy
A	no change	increases by 3.34×10^5 J
B	increases by 3.34×10^5 J	no change
C	increases by 1.67×10^5 J	increases by 1.67×10^5 J
D	increases by 3.34×10^5 J	Increases by 3.34×10^5 J