13 Consider the following:

S: 1 kg of ice at 0 °C
L1: 1 kg of water at 20 °C
L2: 1 kg of water at 40 °C
G: 1 kg of steam at 100 °C

Which of the following statements is ***false***?

A L2 contains molecules with higher average kinetic energies than L1.

B S has higher potential energy than G.

C There is positive work done on G when G condenses.

D The amount of thermal energy S must gain in order to melt is less than the amount of thermal energy G must lose in order to condense.