

## BORN-HABER CYCLE

Please drag the correct equation for each enthalpy:

Enthalpy of atomization of sodium,  $\Delta H_a \text{ Na}$

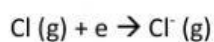
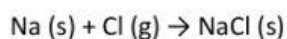
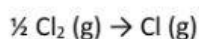
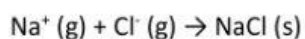
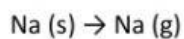
Enthalpy of atomization of chlorine,  $\Delta H_a \text{ Cl}$

First ionization energy of sodium,  $IE_1 \text{ Na}$

Electron affinity of chlorine,  $EA_1 \text{ Cl}$

Enthalpy of formation of sodium chloride,  $\Delta H_f \text{ NaCl}$

Lattice energy of sodium chloride,  $\Delta H_{LE} \text{ NaCl}$



First, let's fill in the blank with the correct answers

Na (g)

$\text{Na}^+ \text{ (g)}$

Na (s)

Cl (g)

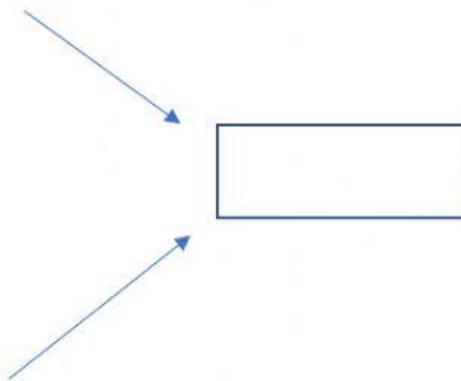
$\frac{1}{2} \text{Cl}_2 \text{ (g)}$

$\text{Cl}^- \text{ (g)}$

NaCl (s)

+

+



Construct energy level diagram of sodium chloride, NaCl