5/17A 850 lb. → Kg. , 66 mph. miles/hr

KE = J = $\frac{Kg \cdot m^2}{sec^2}$

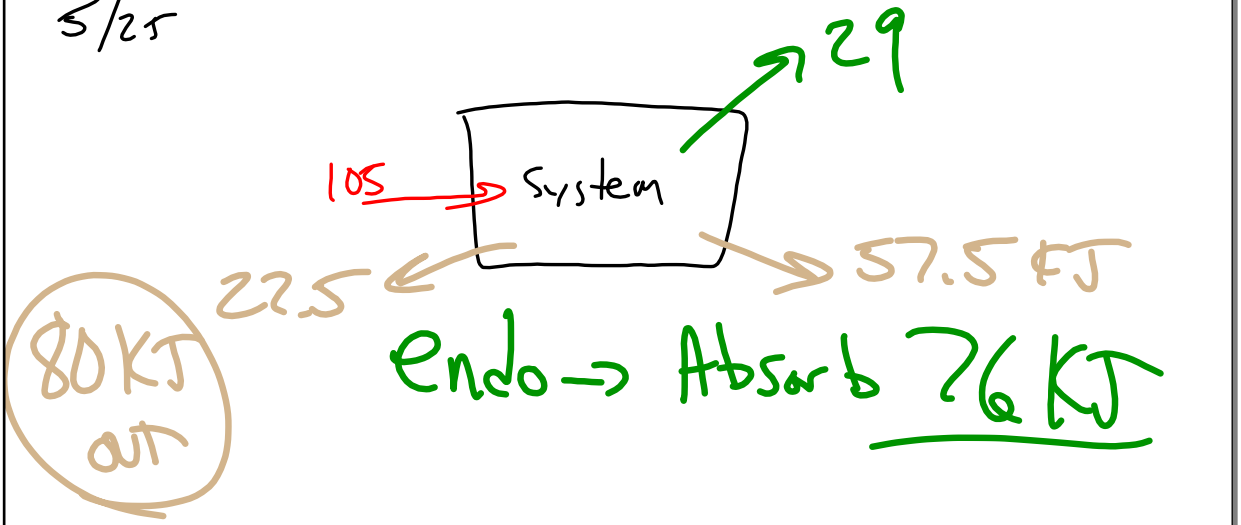
$\frac{850\ lb}{1} \left| \frac{1\ Kg}{2.2\ lb} \right. = 386.36\ Kg$

$\frac{66\ miles}{1\ hr} \left| \frac{1\ hr}{60\ min} \right| \frac{1\ min}{60\ sec} \left| \frac{1.6\ Km}{1\ mile} \right| \frac{1000\ m}{1\ Km} = 29.52 \frac{m}{sec}$

$KE = \frac{1}{2} m v^2$

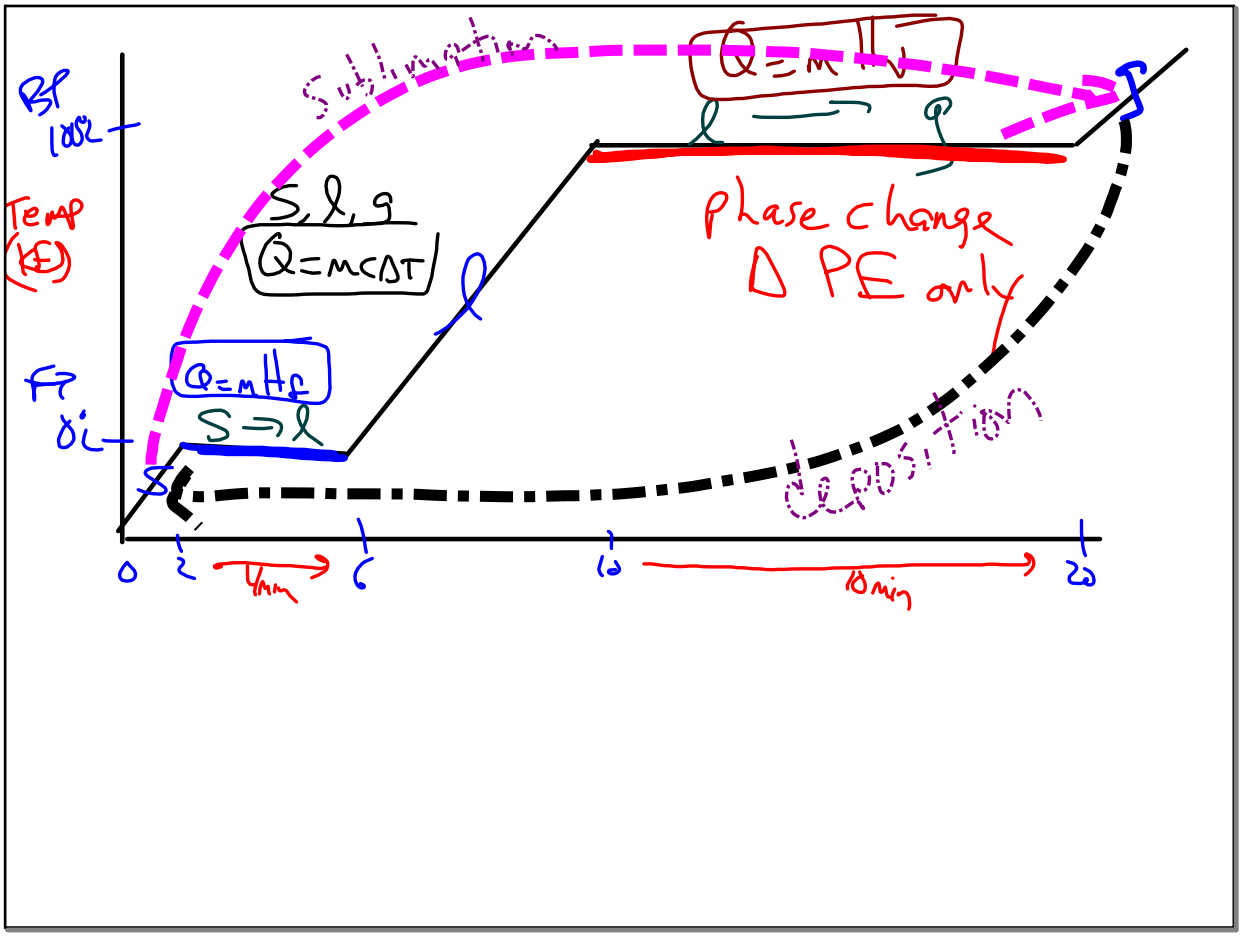
$= \frac{1}{2}(386.36)(29.52)^2 = 1.6834 \times 10^5\ J$

5/25



80 KJ out

endo → Absorb 76 KJ

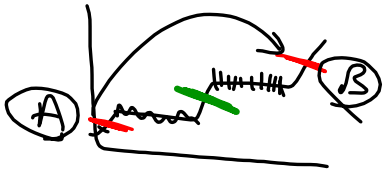


5g Ice at −10°C heat to steam at 110°C

$C_{H_2O} = \frac{4.18\ J}{g \cdot K}$

$H_f = 334\ J/g$

$H_v = 2260\ J/g$



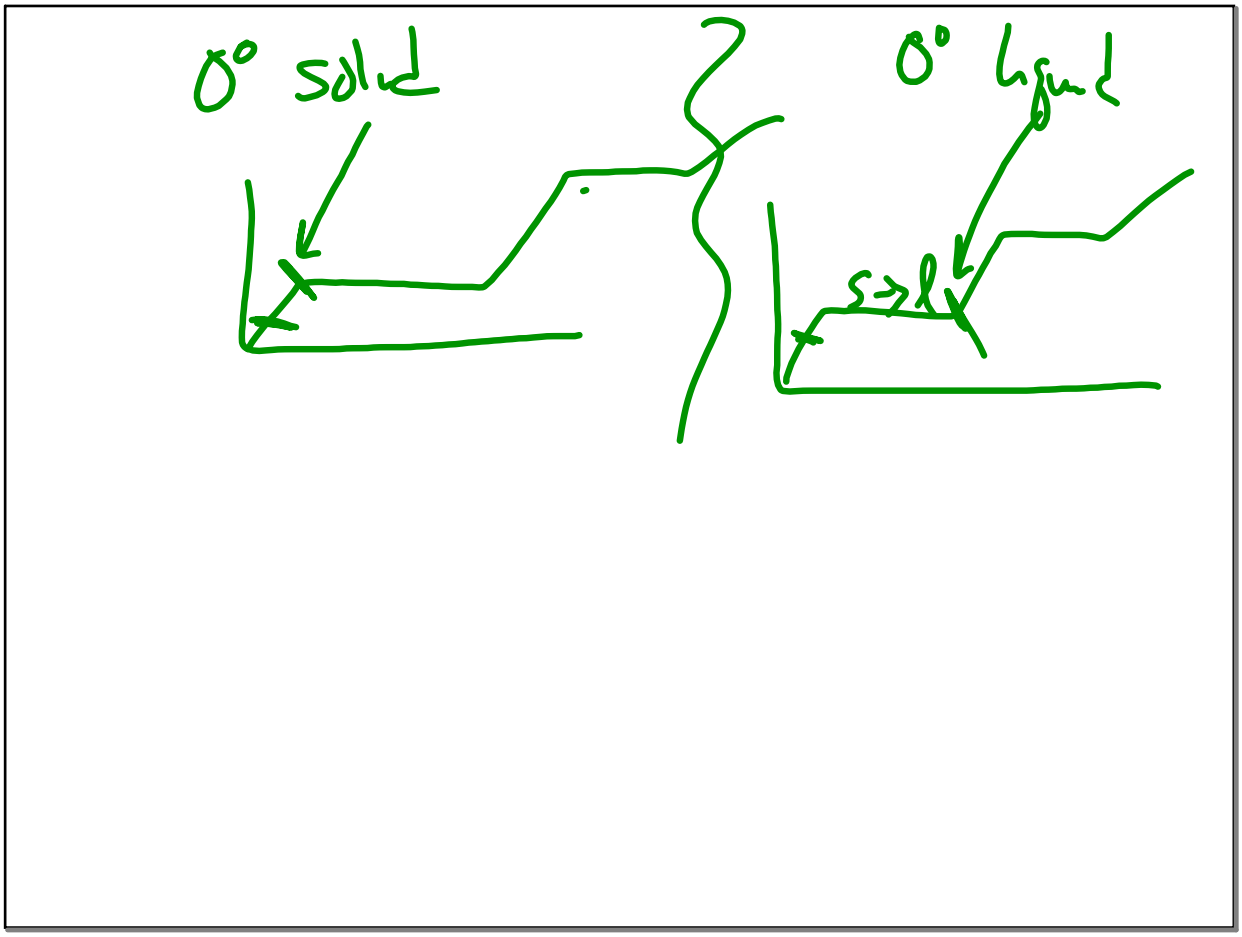
+ Q=mcΔT
+ Q=mHf
Q=mHv

} 15478 J

(75)

Q=mcΔT 5(4.18)(85)

Q=mHf 5(334) } →



$4Al_{(s)} + 3O_{2(g)} \rightarrow 2Al_2O_{3(s)}$ $\Delta H = -3351$ kJ

$4Al_{(s)} + 3O_{2(g)} \rightarrow 2Al_2O_{3(s)} + 3351$ kJ

ΔH part of mole ratio

out product

exo