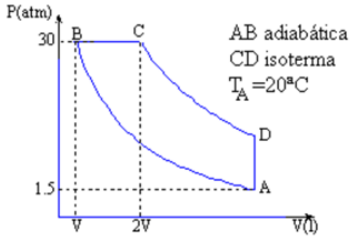
Dados



$T(B) = 600K$

$R = 8,314$ $= J/mol\,K$

$1\,cal = 4,186\,J$

$1\,atm = 1,013 \times 10^5\,Pa$

$C_V = \frac{3R}{2}$

Parte A

	P	V	T
A	1,5	2006,9	181,1
B	30	332,6	600
C	30	665,12	1200
D	9,93	2009,6	1198,8

$C_V = \frac{3}{2}R \quad C_P = \frac{5}{2}R \quad \gamma = \frac{C_P}{C_V} = \frac{5}{3}$

$V_B = \frac{nRT_B}{P_B} = \frac{2 \cdot 8,314 \cdot 600}{30}$

$V_B = 332,6$

$V_C = 2V_B = 665,12$

$A \to B : 1,5 \cdot V_A^{5/3} = 30 \cdot (332,6)^{5/3}$

$V_A = 2006,9$

$C \to D : 30 \cdot 665,12 = 2006,9 \cdot P_D$

$P_D = 9,93$

$T_C = \frac{V_C \cdot P_C}{nR} = \frac{665,12 \cdot 30}{2 \cdot 8,314} = 1200\,K$

$T_A = \frac{V_A \cdot P_A}{nR} = \frac{2006,9 \cdot 1,5}{2 \cdot 8,314} = 181,1\,K$

$T_D = \frac{V_D \cdot P_D}{nR} = \frac{2006,9 \cdot 9,93}{2 \cdot 8,314} = 1198,8\,K$