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\[ \frac{V_1}{V_2} = \frac{2}{1} \]

\[ T_A = \frac{P_i V_i}{nR} \]

\[ \frac{V_1}{V_2} = \frac{Ah}{A \frac{h}{2}} \]

\[ T_2 = \frac{PV_2}{n_2 R} \]

\[ T_B = \frac{3P_i V_i}{nR} \]

\[ T_1 = \frac{PV_1}{n_1 R} \]

\[ T_C = \frac{9P_i V_i}{nR} \]

\[ T_D = \frac{3P_i V_i}{nR} \]