2020

Билет 21

№21

$i = 6$

$Q = 4\ кДж$

$p = const$

$A - ?$

$Q = \Delta U + A$ $\quad A = p\Delta V$ $\quad \Delta U = 3\nu R\Delta T$

$PV = \nu RT$

$A = \nu R\Delta T$ $\quad \Delta U = 3A$

$Q = 4A$

$\boxed{A = \frac{Q}{4}} = 1\ кДж$

Билет 22

$p = \alpha V^4$ $\quad P_0 = \alpha V_0^4$ $\quad \frac{P_0}{P} = \left(\frac{V_0}{V}\right)^4 = \frac{1}{16}$ $\quad \boxed{P = 16P_0}$

$V_2 = 2V_0$ $\quad P = \alpha V^4$

$A = \int_{V_0}^{2V_0} P\,dV$ $\quad P = \alpha V^4$ $\quad \int \alpha V^5 \Big|_{V_0}^{2V_0}$