

$$\begin{aligned}
m &= \rho V \\
s &= vt \\
s &= \frac{1}{2}at^2 + v_0t + s_0 \\
v &= at \\
s &= \varphi r \\
\varphi &= \omega r \\
\omega &= 2\pi f \\
f &= \frac{1}{T} \\
a_d &= \frac{v^2}{r} \\
p &= mv \\
I &= F \Delta t \\
F &= ma \\
M &= rF \\
W &= F s \cos \alpha \\
E_k &= \frac{1}{2}mv^2 \\
E_p &= mgh \\
W &= Pt \\
P &= Fv \\
\eta &= \frac{P}{P_0} \\
E_k &= \frac{1}{2}J\omega^2 \\
J &= mr^2 \\
F_t &= f F_n \\
F_g &= \kappa \frac{m_1 m_2}{r^2} \\
F_g &= Km \\
K &= \kappa \frac{M}{(R+h)^2} \\
F &= pS \\
p &= \rho hg \\
Sv &= \text{konst.} \\
\frac{1}{2}\rho v^2 + p &= \text{konst.}
\end{aligned}$$

$$\begin{aligned}
F &= \frac{1}{2}CS\rho v^2 \\
F &= 6\pi r\eta v \\
Q &= C\Delta t \\
Q &= cm\Delta t \\
Q &= \lambda S \frac{T_1 - T_2}{d} \\
\Delta U &= W + Q \\
v_k &= \sqrt{\frac{3kT}{m_0}} \\
E_0 &= \frac{3}{2}kT \\
p &= \frac{1}{3} \frac{N}{V} m_0 v_k^2 \\
pV &= NkT = nR_m T \\
pV^\kappa &= \text{konst.} \\
c_v &= \frac{Q_v}{m\Delta T} \\
c_p &= \frac{Q_p}{m\Delta T} \\
\kappa &= \frac{c_p}{c_v} \\
\eta &= 1 - \frac{T_2}{T_1} \\
\sigma_n &= \varepsilon E \\
\varepsilon &= \frac{1}{E} \frac{F}{S} \\
l &= l_0(1 + \alpha \Delta t) \\
V &= V_0(1 + \beta \Delta t) \\
\beta &= 3\alpha \\
F &= \sigma l \\
p_k &= \frac{2\sigma}{r} \\
\Phi &= \frac{m}{V} \\
\Phi &= \frac{\Phi}{\Phi_m} \\
y &= y_m \sin(\omega t + \phi_0)
\end{aligned}$$

$$\begin{aligned}
v &= v_m \cos \omega t \\
a &= -\omega^2 y \\
F &= -ky \\
\omega_0 &= \sqrt{\frac{k}{m}} \\
f_0 &= \frac{1}{2\pi} \sqrt{\frac{k}{m}} \\
T &= 2\pi \sqrt{\frac{l}{g}} \\
y &= y_m \sin \omega \left(t - \frac{x}{v}\right) \\
&= y_m \sin 2\pi \left(\frac{t}{T} - \frac{x}{\lambda}\right) \\
v &= \lambda f \\
F_e &= \frac{1}{4\pi\varepsilon} \frac{Q_1 Q_2}{r^2} \\
\varepsilon &= \varepsilon_0 \varepsilon_r \\
F_e &= EQ \\
\sigma &= \frac{Q}{S} \\
\phi &= \frac{E_p}{Q} \\
U &= \phi_2 - \phi_1 \\
U &= Ed \\
W &= QU \\
Q &= CU \\
C &= \frac{\varepsilon S}{d} \\
W &= \frac{1}{2}CU^2 \\
\frac{1}{C} &= \frac{1}{C_1} + \frac{1}{C_2} + \dots \\
C &= C_1 + C_2 + \dots \\
Q &= It \\
U &= IR \\
U_e &= I(R_i + R) \\
G &= \frac{1}{R}
\end{aligned}$$

$$\begin{aligned}
\rho &= \frac{RS}{l} \\
\rho &= \rho_0(1 + \alpha \Delta t) \\
R &= R_1 + R_2 + \dots \\
\frac{1}{R} &= \frac{1}{R_1} + \frac{1}{R_2} + \dots \\
\sum_{k=1}^n I_k &= 0 \\
\sum_{i=1}^m U_{ei} &= \sum_{k=1}^n R_k I_k \\
P &= UI \\
m &= A Q = \frac{M_m}{Fv} Q \\
F_m &= BIl \sin \alpha \\
F_m &= QvB \sin \alpha \\
F &= \frac{\mu}{2\pi} \frac{I_1 I_2 l}{d} \\
B &= \frac{\mu}{2\pi} \frac{I}{d} \\
B &= \mu \frac{I}{2r} \\
B &= \mu \frac{NI}{l} \\
\Phi &= BS \cos \alpha \\
U_i &= \frac{-\Delta\Phi}{\Delta t} \\
\Phi &= LI \\
E_m &= \frac{1}{2}LI^2 \\
U &= U_m \sin \omega t \\
U_m &= U_{ef} \cdot \sqrt{2} \\
Z &= \sqrt{R^2 + X^2} \\
x_L &= \omega L \\
x_C &= \frac{1}{\omega C} \\
\omega_0 &= \frac{1}{\sqrt{LC}} \\
P &= UI \cos \phi
\end{aligned}$$

$$\begin{aligned}
\frac{U_2}{U_1} &= \frac{N_2}{N_1} \\
c &= \frac{1}{\sqrt{\varepsilon_0 \mu_0}} \\
n &= \frac{c}{v} \\
\frac{\sin \alpha}{\sin \beta} &= \frac{v_1}{v_2} = \frac{n_2}{n_1} \\
\frac{1}{a} + \frac{1}{a'} &= \frac{2}{r} \\
r &= 2f \\
\frac{1}{a} + \frac{1}{a'} &= \frac{2}{r} \\
\Phi &= \frac{1}{f} \\
Z &= \frac{y'}{y} \\
Z &= \frac{-a'}{a} = \frac{-f}{a-f} \\
\lambda_0 &= \lambda n \\
2nd + \frac{\lambda}{2} &= k\lambda \\
2nd + \frac{\lambda}{2} &= (2k+1)\lambda \\
b \sin \alpha_k &= k\lambda \\
E &= \frac{\Delta\Phi}{\Delta S} \\
I &= \frac{\Delta\Phi}{\Delta\Omega} \\
E &= \frac{I}{r^2} \cos \alpha \\
\lambda_m T &= b \\
M_e &= \sigma T^4 \\
\Delta t &= \frac{\Delta t_0}{\sqrt{1 - \frac{v^2}{c^2}}}
\end{aligned}$$

$$\begin{aligned}
m &= \frac{m_0}{\sqrt{1 - \frac{v^2}{c^2}}} \\
l &= l_0 \sqrt{1 - \frac{v^2}{c^2}} \\
u &= \frac{u' + v}{1 + \frac{u'v}{c^2}} \\
E &= mc^2 \\
E &= hf \\
p &= \frac{hf}{c} \\
m &= \frac{h}{\lambda c} \\
hf &= W_v + \frac{1}{2}mv^2 \\
\lambda &= \frac{h}{mv} \\
N(t) &= N_0 e^{-\lambda t} \\
\lambda &= \frac{\ln 2}{T} \\
\frac{\sin \alpha}{a} &= \frac{\sin \beta}{b} = \frac{\sin \gamma}{c} \\
c^2 &= a^2 + b^2 - 2ab \cos \gamma \\
c &= 299\,792\,458 \text{ m}\cdot\text{s}^{-1} \\
\mu_0 &= 4\pi \cdot 10^{-7} \text{ N}\cdot\text{A}^{-2} \\
\varepsilon_0 &= 8,85 \cdot 10^{-12} \text{ F}\cdot\text{m}^{-1} \\
\kappa &= 6,67 \cdot 10^{-11} \text{ m}^3 \cdot \text{kg}^{-1} \cdot \text{s}^{-2} \\
h &= 6,626 \cdot 10^{-34} \text{ J}\cdot\text{s} \\
e &= 1,602 \cdot 10^{-19} \text{ C} \\
N_A &= 6,022 \cdot 10^{23} \text{ mol}^{-1} \\
k &= 1,38 \cdot 10^{-23} \text{ J}\cdot\text{K}^{-1} \\
R &= 8,31 \text{ J}\cdot\text{mol}^{-1} \cdot \text{K}^{-1} \\
F &= 96\,485 \text{ C}\cdot\text{mol}^{-1} \\
\sigma &= 5,67 \cdot 10^{-8} \text{ W}\cdot\text{m}^{-2} \cdot \text{K}^{-4}
\end{aligned}$$