1. Definition of velocity and acceleration (2) $\vec{v} = \frac{d\vec{r}}{dt}, \quad \vec{a} = \frac{d\vec{v}}{dt} = \frac{d^2\vec{r}}{dt^2}$
2. Tangential and normal component of the acceleration (1) $\vec{a} = \dot{v}\vec{t} + \frac{v^2}{\rho}\vec{n}$
3. Velocity and acceleration in Carthesian coordinate system (2)
   $\vec{v} = \dot{x}\vec{i} + \dot{y}\vec{j} + \dot{z}\vec{k}, \quad \vec{a} = \ddot{x}\vec{i} + \ddot{y}\vec{j} + \ddot{z}\vec{k}$
4. Velocity in cylindrical coordinate system (1) $\vec{v} = \dot{\rho}\vec{e}_\rho + \rho\dot{\varphi}\vec{e}_\varphi + \dot{z}\vec{k}$
5. The axiom of force (2) $\dot{\vec{p}} = \vec{F}, \quad m\ddot{\vec{r}} = \vec{F}$
6. Action and reaction forces (1) $\vec{F}_{1,2} = -\vec{F}_{2,1}$
7. Definition of work done (1) $W_{1,2} = \int_{1,2} \vec{F} d\vec{r}$
8. Work-energy theorem (1) $W_{1,2} = T_2 - T_1, \quad T = \frac{1}{2}mv^2$
9. Connection between instantaneous power and kinetic energy (1) $P = \frac{dT}{dt}, \quad T = \frac{1}{2}mv^2$
10. Linear restoring force (1) $F_x = -Dx$
11. Equation of motion of the undamped oscillation (1) $m\ddot{x} = -Dx$
12. Displacement time function of the undamped oscillation (1) $x(t) = A\sin(\omega_0 t + \delta)$
13. Equation of motion of the damped oscillation (1) $m\ddot{x} = -Dx - K\dot{x}$
14. Displacement time function of the undamped oscillation, weak damping (1)
    $x(t) = Ce^{-\alpha t}\sin(\gamma t + \delta)$
15. Kontinuitási egyenlet integrális és differenciális alakja (2)
    $\frac{d}{dt}\int_V \rho dV = -\oint_A \rho\vec{v}d\vec{A}, \quad \frac{\partial\rho}{\partial t} + \nabla(\rho\vec{v}) = 0$
16. Kontinuitási egyenlet vékony áramcsőre (1) $\rho_1 v_1 A_1 = \rho_2 v_2 A_2$
17. Bernoulli-egyenlet (1) $p + \rho gh + \frac{1}{2}\rho v^2 = állandó$
18. Hidrosztatikai nyomás (1) $p = p_0 + \rho gy$
19. The first law of thermodynamics, for elementary and finite process (2)
    $dE = \delta Q + \delta W, \quad \Delta E_{1,2} = Q + W$
20. Quasistatical work (1) $W_{12} = -\int_{V_1}^{V_2} pdV$
21. Internal energy of ideal gas (1) $E = \frac{f}{2}pV = \frac{f}{2}NkT$
22. General gas law (2) $pV = NkT, \quad pV = \frac{m}{M}RT$
23. Energy due to principle of equipartition (1)
24. Thermal efficiency of the Carnot-cycle (1) $\eta = 1 - \frac{T_2}{T_1}$
25. Thermal expansion of solids (2) $l = l_0(1 + \alpha\Delta t), \quad V = V_0(1 + \beta\Delta t)$