

根本的に新しい事？

$$f(x, y, z) \equiv \frac{\partial}{\partial x} F(x, y, z)$$

$$g(x, y, z) \equiv \frac{\partial}{\partial y} F(x, y, z)$$

$$h(x, y, z) \equiv \frac{\partial}{\partial z} F(x, y, z)$$

$$\frac{d}{dt} h(q, \dot{q}, \ddot{q}) + f(q, \dot{q}, \ddot{q}) - g(q, \dot{q}, \ddot{q}) = 0$$

~~$$\frac{d}{dt} \frac{\partial F(q, \dot{q}, \ddot{q})}{\partial \ddot{q}} + \frac{\partial F(q, \dot{q}, \ddot{q})}{\partial \dot{q}} - \frac{\partial F(q, \dot{q}, \ddot{q})}{\partial q} = 0$$~~