PHYS 7C Notes

Collection of type setted notes from fall quarter of 2022
Physics

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Week 2

1.1 Applications of Newtons Laws

How to deal with multiple objects:
As long as there is no relative motion between multiple objects, you can treat them as a single object. Otherwise, construct a free body diagram for all objects in the system.

1.1.1 Equilibrium

In Equilibrium	Not In Equilibrium
$\sum \vec{F} = \vec{0}$	$\sum \vec{F} = \vec{0}$

When an object is in equilibrium, it's velocity remain constant (and therefore its trajectory remains constant and linear).

1.1.2 Friction Forces

$$f_k^{friction} = \mu_k n$$
$$f_s^{friction} \leq \mu_s n.$$

In general $\mu_k < \mu_s$, but both coefficients of friction can hold values larger than 1. (*Note: both coefficients are dimensionless; no units*).

Week 4

List of Theorems