March 5, 2024 - Physics 11 lesson

- ➤ Warm-up/review
- lesson on **elevator problems** (and other things that accelerate vertically .. e.g. helicopter, hot air balloon, etc)

Warm up/review

- 1. A 25.0 kg crate is resting on a rough level surface (i.e. the surface is not frictionless). A pushing force of 70.0 N pushes to the right.
 - a. Draw the FBD for the crate

- b. Develop (set up) the Newton's 2nd Law equation for the system.
- c. If the crate accelerates to the right at a rate of 2.50 m/s², determine the value of the coefficient of friction between the crate and the ground.
- d. If the crate starts from rest, what is its speed after 5.00 seconds?

2.	-	on is standing on a scale on an elevator (e.g. a bathroom scale, or the kind of scale you on in the Doctor's office to determine your weight): Draw the FBD	
	b.	Develop the Newton's 2 nd Law equation for the system	
3.		elevator with a mass "m" is suspended by a cable. a. Draw the FBD	
	b.	Develop the Newton's 2 nd Law equation for the system	