P12 **Midterm Checklist**

I can:	Example	I got this ☺	I need to work on this!!!
Convert units.			
Find magnitude and direction of a vector.			
Determine the appropriate number of significant digits for a final answer.			
Determine how landing and launching level compare given information about the projectile's time above ground.			
Calculate time to reach maximum height, or time above ground given initial velocity.			
Find time to free fall and free-falling distance for a projectile.			
Find the range of a projectile.			

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Find projectile's displacement in horizontal and vertical direction.			
Find final velocity of a projectile.			
Find initial velocity of a projectile given initial speed.			
Determine relative velocity of a moving or stationary object.			
Analyze and solve kinematics problems in 2D by adding vectors in vector notation, applying N2L to determine acceleration and kinematics formulas in vector notation.			
Apply Newton's Laws.			
Analyze and solve problems involving tension without pulleys.			
Calculate normal force when forces with a vector component perpendicular to the surface of contact are involved. - On a horizontal surface. - On an inclined plane.			

I can:	Example	I got this ☺	I need to work on this!!!
Determine tension and/or acceleration of objects suspended on a rope on a simple pulley.			
Determine acceleration of an object on an inclined plane when an applied force is parallel with the inclined.			
Determine acceleration of an object on an inclined plane when an applied force is **not** parallel with the incline. (L4)			
Determine the force of friction necessary to maintain an object at rest – both on a horizontal surface and on an inclined.			
Define and calculate momentum of an object.			
Apply the Impulse-Momentum theorem.			
Analyze collisions and apply the law of conservation of momentum to determine final or initial velocities.			
Determine whether a collision is elastic or inelastic.			
Analyze explosions and apply the law of conservation of momentum to determine final or initial velocities.			

I can:	Example	I got this ☺	I need to work on this!!!
Analyze a diagram and identify a line of action and a lever arm for any given force.			
Find the center of gravity of a uniform rectangular object.			
Determine a force necessary to maintain rotational, translational, and static equilibrium.			
Determine a lever arm necessary to maintain rotational, translational, and static equilibrium.			
Give examples of objects in translational equilibrium.			
Give examples of objects in rotational equilibrium.			
Give examples of objects in static equilibrium.			
Define and calculate torque given a diagram or description of a scenario.			