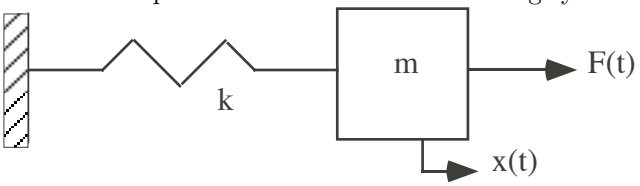
General Information on Prerequisite Course				
Course	*Where Taken*	*Term/Year*	*Instructor*	*Grade*
ME 213: Dynamics				

Student Assessment of Their Knowledge of Prerequisite Topic for Course Listed Above (Check applicable box)				
Topic	*ABET Topic Letters*	*Can Explain of Apply Concept*	*Heard of Topic*	*Never Heard of Topic*
Free Body Diagrams	a			

Test Question Assessment of Student's Prerequisite Knowledge

Question:
Derive the equation of motion of the following system:



Answer:

Grade:_____ out of _2_ points

General Information on Prerequisite Course				
Course	*Where Taken*	*Term/Year*	*Instructor*	*Grade*
ME 213: Dynamics				

Student Assessment of Their Knowledge of Prerequisite Topic for Course Listed Above (Check applicable box)				
Topic	*ABET Topic Letters*	*Can Explain of Apply Concept*	*Heard of Topic*	*Never Heard of Topic*
Rigid body motion	a			

Test Question Assessment of Student's Prerequisite Knowledge

Question:
A uniform cylinder of mass $m = 100$kg and radius $r = 0.5$ m is released from rest on a sloped surface with an incline of 30°. The coefficient of friction between the cylinder and the sloped surface is 0.3. Find the cylinder's angular and linear acceleration.
Answer:

Grade:_____ out of _2_ points

General Information on Prerequisite Course				
Course	*Where Taken*	*Term/Year*	*Instructor*	*Grade*
ME 213: Dynamics				

Student Assessment of Their Knowledge of Prerequisite Topic for Course Listed Above (Check applicable box)				
Topic	*ABET Topic Letters*	*Can Explain of Apply Concept*	*Heard of Topic*	*Never Heard of Topic*
Rigid body motion	a			

Test Question Assessment of Student's Prerequisite Knowledge

Question:
A uniform cylinder of mass $m = 100$kg and radius $r = 0.5$ m is released from rest on a sloped surface with an incline of 30° and rolls without slipping. Write the kinetic energy and potential energy, individually (*not added!*) of the cylinder as a function of position and linear velocity.
Answer:

Grade:_____ out of _2_ points