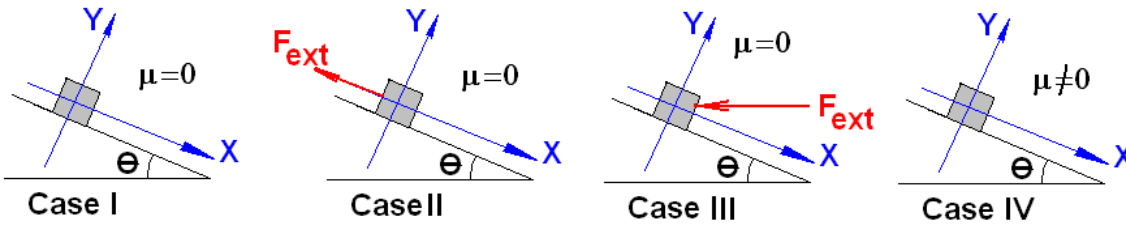


Physics I

Inclines



Case (I): No friction, no other forces. Then the acceleration is: $a = g \sin \theta$

Case (II): No friction. External force parallel to the incline keeping the object from sliding. Then the external force must be: $F_{external} = mg \sin \theta$

Case (III): No friction. External force horizontal keeping the object from sliding. Then the external force must be: $F_{external} = mg \tan \theta$

Case (IV): Friction present, No other external forces. Then the acceleration must be:
 $a = g(\sin \theta - \mu \cos \theta)$