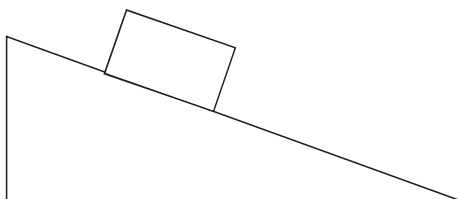


# Inclined Planes

## Inclined Planes

- What forces are present on the box?



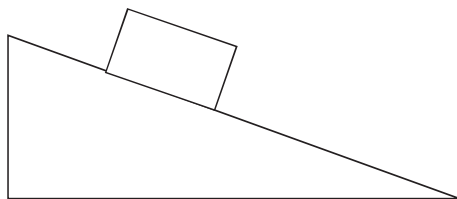
- When will it slide?

## When will it slide?

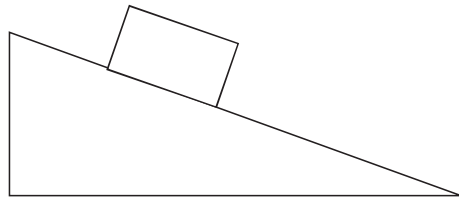
- A packing crate is placed on a  $20^\circ$  inclined plane. If the coefficient of friction between the crate and the plane is 0.65, will the crate slide down the plane?

## Inclined Plane Example

- A 65.0 kg crate is accelerated at  $7 \text{ m/s}^2$  up an incline making a  $25.0^\circ$  angle with the horizontal. If the coefficient of sliding friction between the crate and the incline is 0.200, how much force is required ?

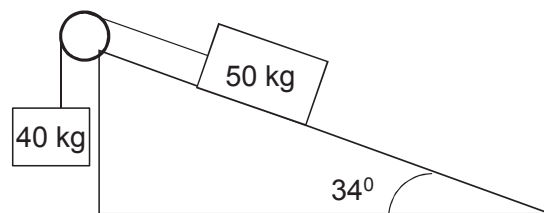


## Inclined Plane Example



## Incline Plane Example 2

- If  $\mu_s$  between the incline and box is 0.21 and the  $\mu_k$  is 0.13, will it accelerate? If it does, what is the acceleration and in what direction?



## Incline Plane Example 2

