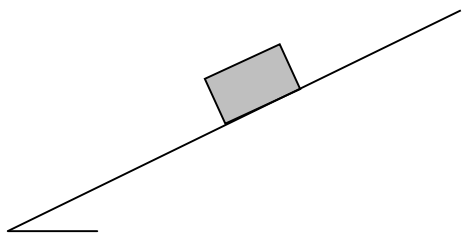


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Inclined Plane - a surface that is _____ at some angle above _____

The weight of an object on an inclined plane acts straight _____, but the object cannot move in that direction. We _____ the weight into two components:



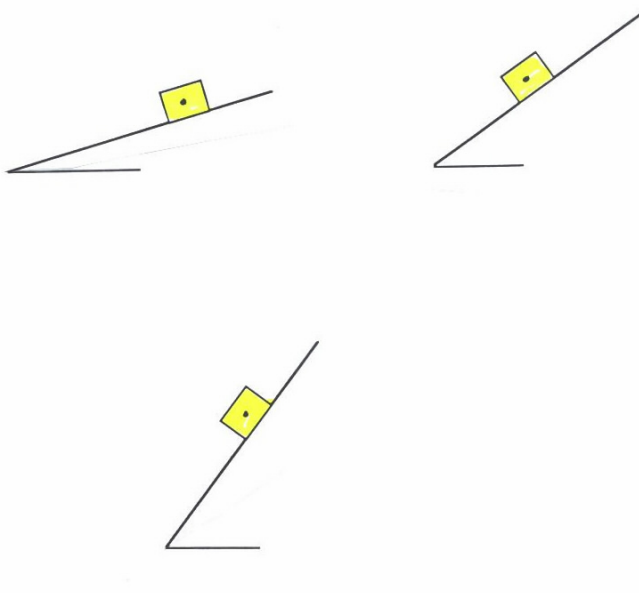
parallel component of F_w :

-
-

perpendicular component of F_w :

-
-

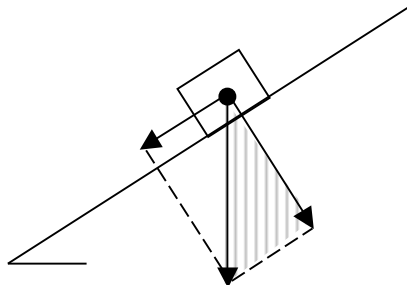
Practice Drawings:



As θ increases:

-
-

Label force vectors and θ for the hill and for the force triangle.



To calculate components:

- $F_{||} =$
- $F_{\perp} =$

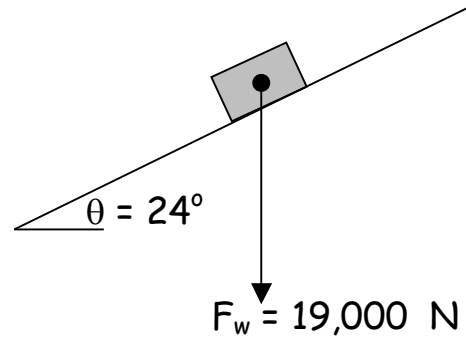
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Example Problems:

Robin Banks parks her 19,000 N car on a hill with a 24° incline.

Calculate the component of its weight which-

- 1) presses the car into the hill
- 2) pulls the car down the hill



A skier with a mass of _____ kg is on a ski slope that is inclined _____ $^\circ$ above horizontal. With how much force is the skier pulled down the hill?

Truck on a hill problem: $F_w = \underline{\hspace{2cm}} \text{ N}$
 $\theta = \underline{\hspace{2cm}}$