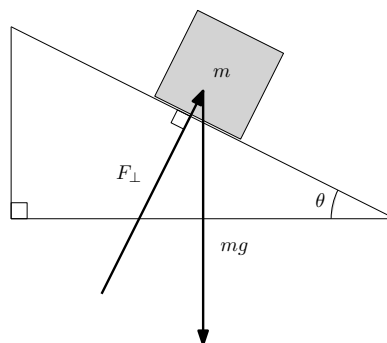
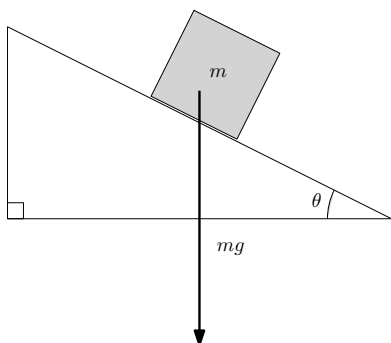


Now consider a mass on a surface that is *not* horizontal. All of the same concepts and equations apply. The key to understanding the difference is understanding the normal force. Remember F_{\perp} is always perpendicular to the *surface*. This Notepage gives step-by-step instructions for drawing a triangle to understand the forces.

The first force that we know about for sure is the force of gravity acting on the mass. $F_g = mg$

We also know that the normal force must be perpendicular to the surface.



From here we use similar triangles to finish the force vectors. Notice that F_{\parallel} is parallel to the surface and F_{\perp} is perpendicular. F_{\parallel} is the force "going down" the inclined plane. If there is friction, it is in the opposite direction of F_{\parallel} . The most common mistake in drawing this triangle is included below. Notice that in the correct triangle, the right angles are closer together.

