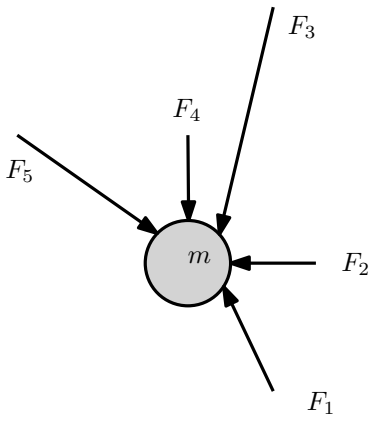
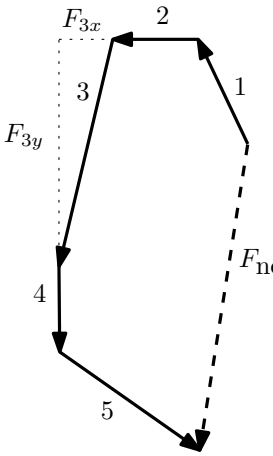
Sometimes there are many forces acting on a body.



To find the net force, we find the sum of the forces using vector addition. Think of this like counting on a number line in two dimensions; rise over run. When you take the sine, you get the y-component or rise. When you take the cosine, you get the x-component or run.



$$F_{\text{net}} = \sum_i F_i = F_1 + F_2 + F_3 + F_4 + F_5$$

Whatever the net force is, *that* is used to understand the acceleration of an object. If you already know the acceleration of an object, then you can say something about the net force acting on it.

$$F_{\text{net}} = ma$$