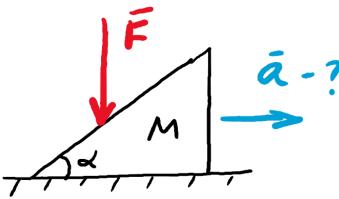Problems.

1. A wedge of mass M is on a frictionless plane. Force F is applied to the wedge (see picture). Find the wedge's acceleration.

2. Same as problem 1, but now the friction coefficient between the wedge and the plane is μ.

3. A small brick of mass m is sliding down the wedge without friction (see picture). Find acceleration of the wedge. Again, there is no friction between the wedge and the plane.