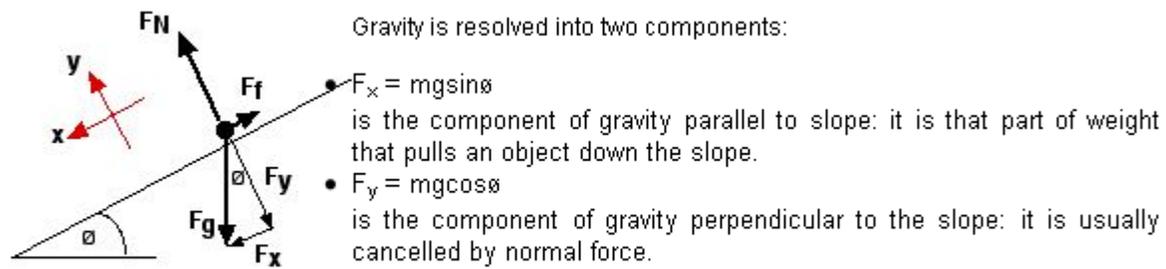In problems involving **slope** the usual approach is to use a different frame of reference. Since motion is parallel to the slope, directions are specified as parallel to the slope or perpendicular to the slope.

Gravity is resolved into two components:

- $F_x = mgsinø$

  is the component of gravity parallel to slope: it is that part of weight that pulls an object down the slope.

- $F_y = mgcosø$

  is the component of gravity perpendicular to the slope: it is usually cancelled by normal force.

Since normal force in most problems is equal in magnitude to mgcosø, then friction = (µN) = µmgcosø. That is, µmgcosø = friction in most slope problems.