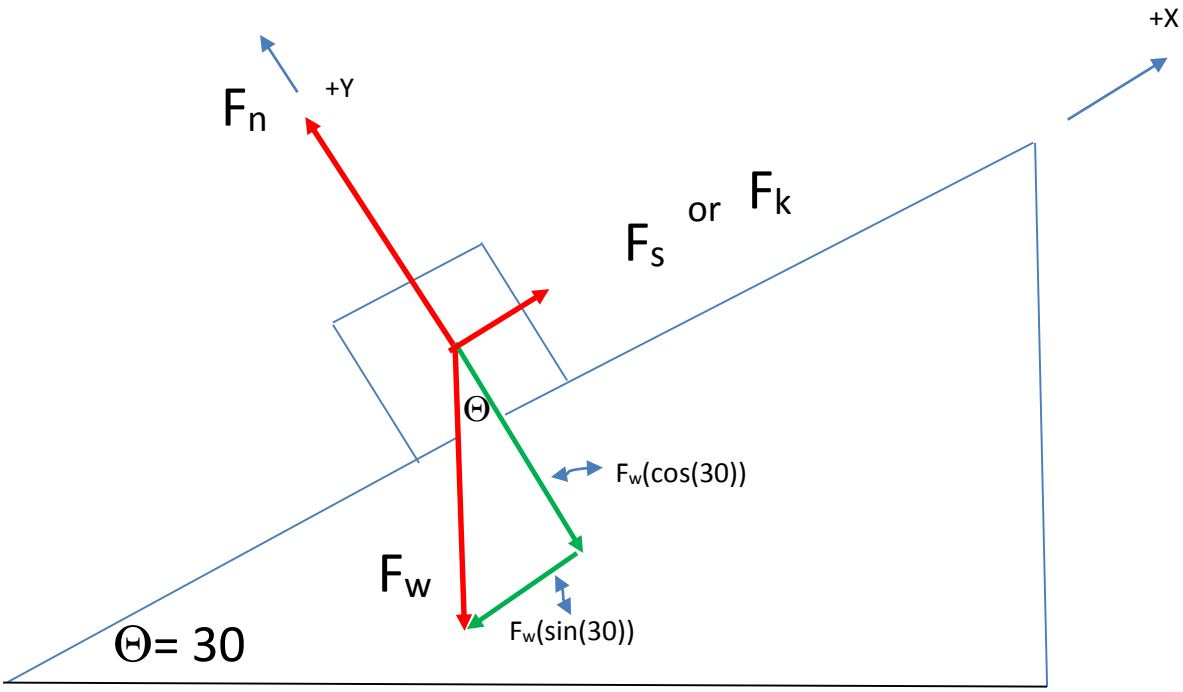
Forces on an object on an Inclined Plane

If the box is <u>not</u> moving, then:

$F_{xnet} = - F_w(\sin(30)) + F_s = 0$ $\quad$ $F_{ynet} = F_n - F_w(\cos(30)) = 0$



If the box is moving, then:

$F_{xnet} = - F_w(\sin(30)) + F_k = ma_x$ $\quad$ $F_{ynet} = F_n - F_w(\cos(30)) = 0$

NOTE:

F_n is the Normal Force (n)

F_w is the Weight Force (mg)

F_s is the Static Friction Force ($\mu_s n$)

$F_{k\ is}$ is the Kinetic Friction Force ($\mu_k n$)