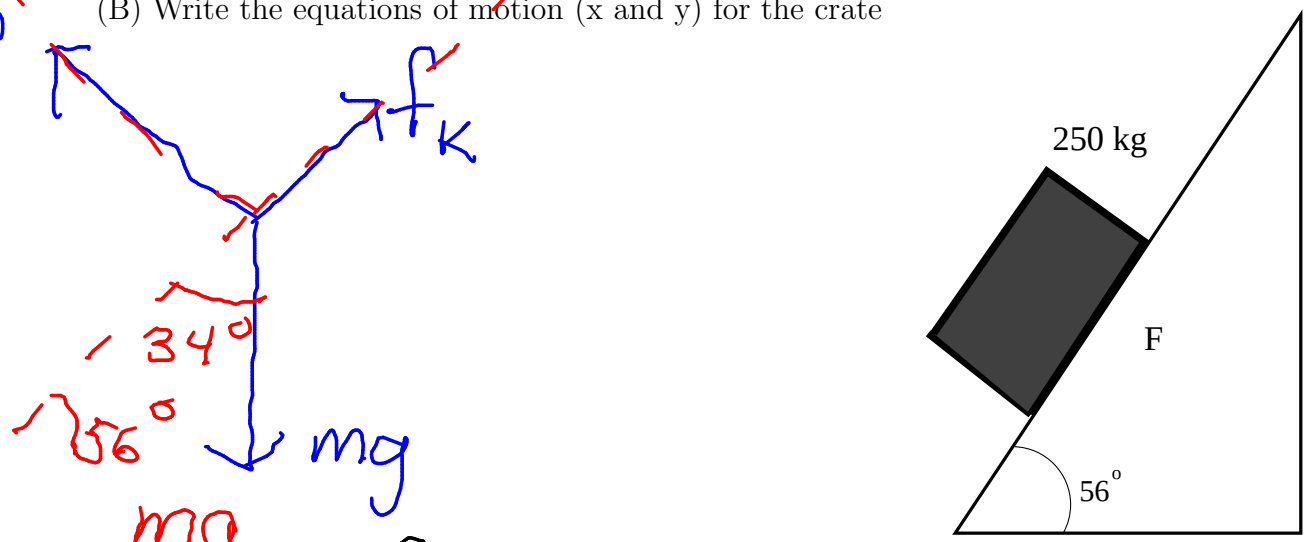
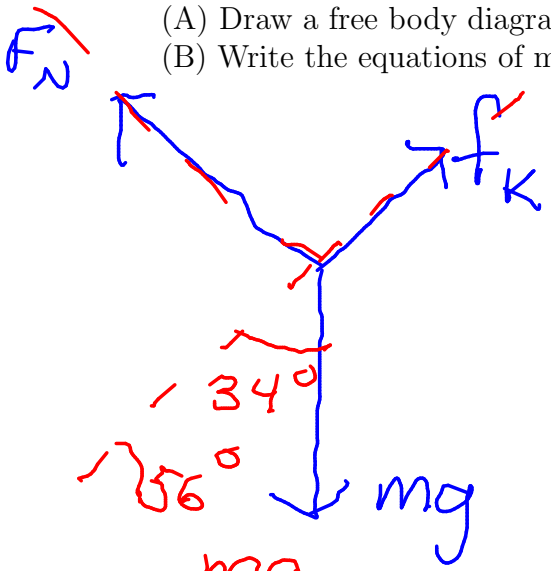
Quiz 3 – PH241 **Name**_____ ☐ **Pledged**

Show all work: Draw axis, component vectors, etc.
$|\vec{f}_k| = \mu_k |\vec{F}_N|$ $\vec{F} = m\vec{a}$

A 250 kg crate slides down an incline that has friction at constant acceleration as shown in the figure.
(A) Draw a free body diagram for the crate
(B) Write the equations of motion (x and y) for the crate





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X: $\sum F_x = f_K - mg\sin 56^\circ$

Y: $0 N = F_N - mg\cos 56^\circ$