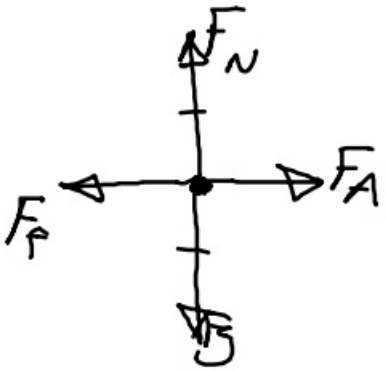
•A 100 kg crate rests on a level surface where the coefficients of static and kinetic friction are 0.6 and 0.4 respectively. How much force must be applied horizontally to:

•A) get the crate to start sliding?

•B) keep the crate sliding at a constant velocity?

A) $F_A > F_{f_s}(max)$

B) $F_A = F_{f_K}$



$F_{f_s} = \mu_s F_N$

$= (0.6)(980N)$

$= 588N$

$F_A > 588N$

B) $F_{f_K} = \mu_K F_N = (0.4)(980)$

$= 392N$

$F_A = 392N$

bonus point to anyone that emails me before class to tell me what I failed to show in this example!