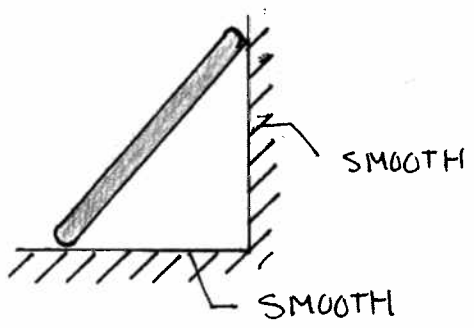
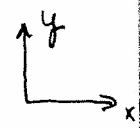


CONSIDER A LADDER ON SMOOTH SURFACES:



F.B.D.:



APPLY EQUILIBRIUM:

$$\sum F_x = 0$$

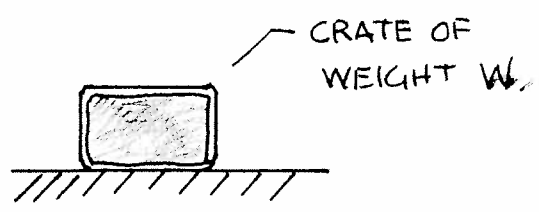
$$\sum F_y = 0$$

$$\sum M = 0$$

DRAW THE REAL F.B.D.

_____ FORCES DEVELOP
 TO OPPOSE _____,
 EITHER ACTUAL OR POTENTIAL.

CONSIDER A CRATE ON A HORIZONTAL SURFACE

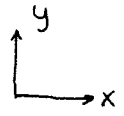


F.B.D.

NOW APPLY A HORIZONTAL FORCE P.

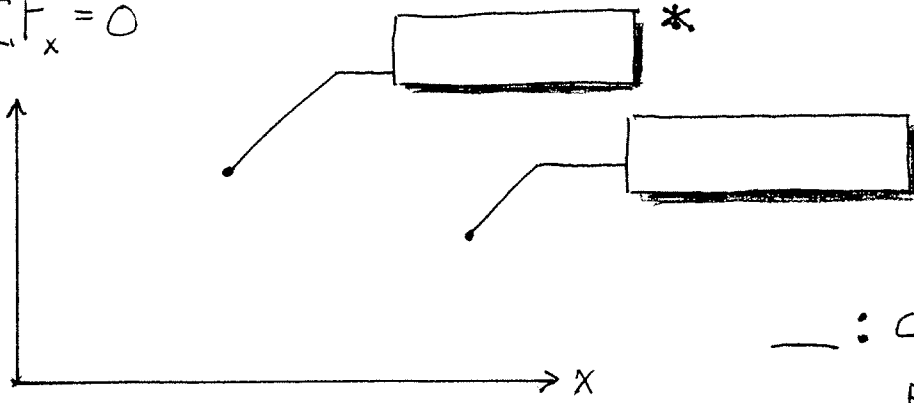


F.B.D.



FOR EQUILIBRIUM

$$\sum F_x = 0$$



— : COEFF of —
 FRICTION

— : COEFF of —
 FRICTION

* AT — MOTION ONLY !



FOR EQUILIBRIUM, THEN

$$\leq f \leq$$

Don't always assume:

-
-
-