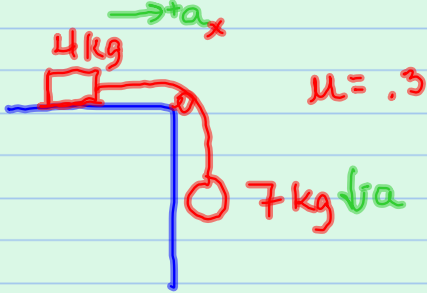
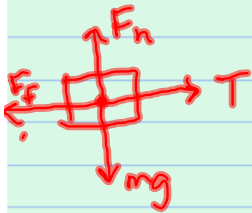


Ex. 4.7 p 102



$a = ?$
 $T = ?$



* $F_f = \mu F_n$

draw FBD for both forces only

$F_n \perp$ up from surface

$$\begin{aligned} \sum F_x &= -F_f + T = ma \\ -\mu F_n + T &= 4a \\ -\mu(39.2) + T &= 4a \\ -.3(39.2) + T &= 4a \end{aligned}$$

$$\begin{aligned} \sum F_y &= T - mg = ma \\ T - 7(9.8) &= 7a \end{aligned}$$

$$\begin{aligned} \sum F_y &= F_n - mg = ma \\ F_n &= mg \\ &= 4(9.8) \\ F_n &= 39.2 \text{ N} \end{aligned}$$

Solve for

$$-11.76 + T = 4a$$

$$T = (4a + 11.76)$$

$$(4a + 11.76) - 68.6 = 7a$$

finish

