Bruce Emerson Sample Prob ENGR 212 Given! w= 4 rad/s m = .5 ku4 rady Ecosty Focostly Hosump no frution, no gravity Read Forces on slider (n/t) FBD in n/t coord, set equal to a in n/t Estimate: a w= 4 rad(s => rw = b = -6m(4) = 2.4 m/s the inward a = $\frac{12}{p} = \frac{6.2 \text{ m}/\text{s}^2}{-6 \text{ m}} = \frac{10 \text{ m/s}^2}{-6 \text{ m}}$ a, = 0 because u) = cost system @ 450 => an= = 7 1/2/ = 7 m/s2 each way F= ma= -5kg(7m/cz) = 3.5-410 in both nermal and therement strong & wall forces

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Sample Prob Evar 212 3/2 Bruce Errenson Soln! Frontly CE Fret = (F+FD) smTH = make en Fret = (FT-FD) costky = man en Franky Franky an = yor en = pwien $Q_{\pm} = \frac{du_{\pm}\hat{e}_{\epsilon}}{dt}\hat{e}_{\epsilon} = 0\hat{e}_{\pm}(\omega = cnst)$ Start w/ easy one $a_t = 0 \Rightarrow (F_t + F_b) \sin T/4 = mal_t = 0$ $\Rightarrow (F_t + F_b) = 0 \Rightarrow F_t = -F_b + assumed$ now the normal direction now the normal direction (FT-FD) cost/4=mpw2=2Fxcost/4p=6m, w=4rad/sm=\frac{1}{2}kg Discossion: I consinally get 70 for the Sources but as I tried to figure out what II could have done better in the estimate I realized I had to rigother the mass in my last calculating. Fixed the missing muss and now every thing

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Sample Prob ENGR 212 Bruce Erreran Soln! Fronthy ex Fret = (F+FD) smT4 = max en Fret = (F_-FD) costik = man FUE INTY en Frank FUCOSTA an = year=pwen at = die & = 0 êt (w = crot) Start w/ easy one $a_t = 0 \Rightarrow (F_t + F_D) \sin T/4 = ma_t^2 = 0$ $\Rightarrow (F_t + F_D) = 0 \Rightarrow F_t = -F_D + assumed$ now the normal direction now the normal direction $(F_{T}-F_{D})\cos \pi_{4} = mpw^{2} = 2F_{T}\cos \pi_{4} p = .6m, w = 4 \text{ rad/s} m = \frac{1}{2}ky$ $=) F_{T} = \frac{mpw^{2}}{2\cos \pi_{4}} = \frac{1}{2} \cdot 6m(4 \text{ m/s})^{2} = 13.39 \text{ M}$ Discossion: I arisinally got 70 for the sources but as I tried to figure out what II could have done better in the estimate I realized I had to regotten the mass in my last calculation Fixed the missing muse and now every thing

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