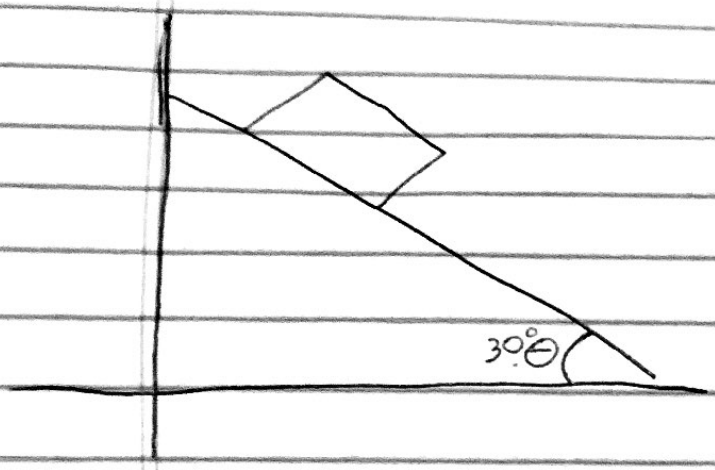

I'm going to assume the ground has the same coefficient of friction as the ramp

$s = \bar{v}t$ $\quad a = {}^{v_i}/_{t}$

$\bar{v} = \frac{v_f + v_i}{2}$

Need to know exit speed of ramp

$a = \frac{\Delta v}{t}$

$u_k = .15$

$u_s = .20$

$s_{ramp} = 3\,m$

$m_{fridge} = 100\,kg$

$V_f = V_i + at$

$s = v_i t + \frac{1}{2} a t^2$

$3 = \frac{1}{2}(3.63)t^2$

$t = 1.29\,s$

time it takes to bottom of ramp

$mg\sin 30 = F_{Fridge}$

$mg\sin 30 = ma_{Fridge}$

$g\sin 30 = a_{Fridge\,(no\ fric)}$

$F_{Normal} = mg\cos 30$

$F_{Kinetic} = .15(mg\cos 30)$

$V_{f_{ramp}} = 3.63 * 1$

$= 4.68\,m$

$F_{total} = mg\sin 30 - .15(mg\cos 30)$

$ma_{Fridge} = mg\sin 30 - .15mg\cos 30$

$a_{Fridge} = 3.63\,m/s^2$

Exit velocity off ramp
4.68 m/s

$F_{Friction} = .15(100)9.8$

$= 147\ N$

~~$147 =$~~

~~$F_{total} = -147 + 4.68(100$~~

$-147 = 100a$

$-1.47\ m/s^2 = a_{fridge}$

$1.47 = 4.68/+$

Time to stop $= 3.18\ s$

$s = \frac{4.68}{2}(3.18)$

$s = 7.44\ m$