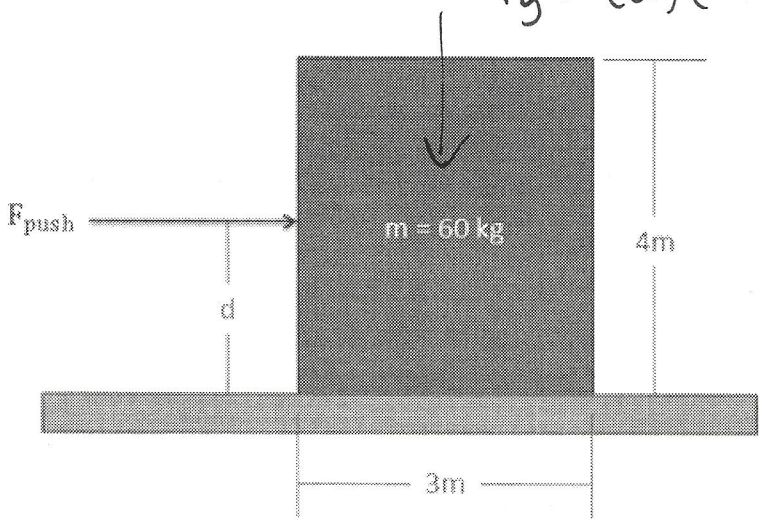
Question 2:

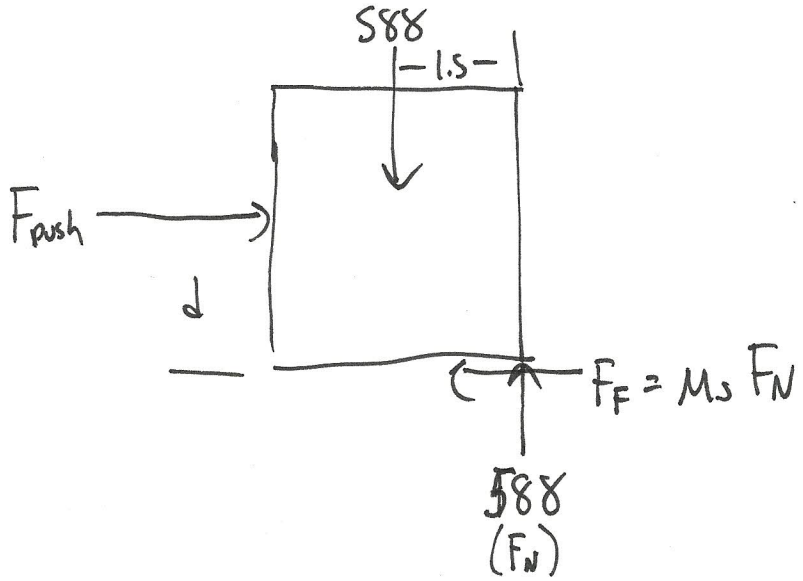
What is the maximum value of d that will allow the box to slide along the surface before tipping?

$F_g = (60)(9.8) = 588\ N$



$\mu_s = .62$

Find the point where both are equally likely to occur



Slip

$F_{push} = F_F = (\mu_s)(F_N)$

$F_{push} = 364.6\ N$

tip

$(F_{push})(d) = (1.5)(F_N)$

$F_{push} = \frac{(1.5)(588)}{d}$

$$364.6 = \frac{(1.5)(588)}{d}$$

$$d = \frac{(1.5)(588)}{364.6}$$

$$\boxed{d = 2.42 \text{ m}}$$