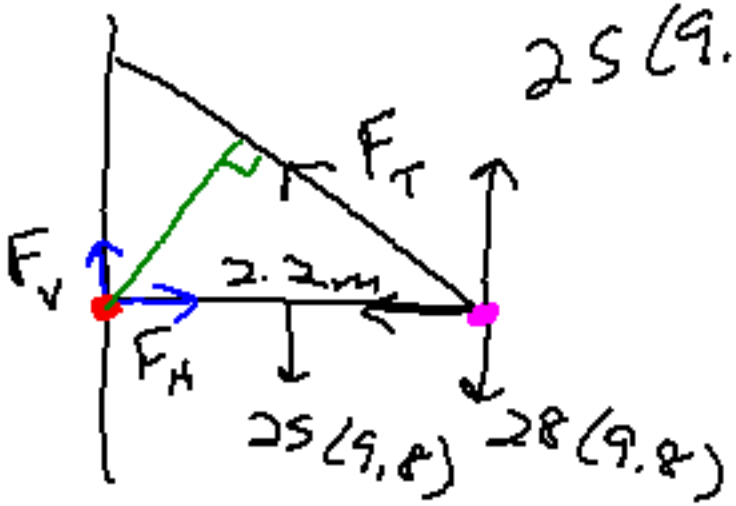
p232 ex 9-6



$25(9.8)(1.1) + 28(9.8)(2.2)$

$= F_T(1.1)$

$F_T = 794\,N$

$25(9.8)(1.1) = F_V(2.2)$

$F_V = 123\,N$

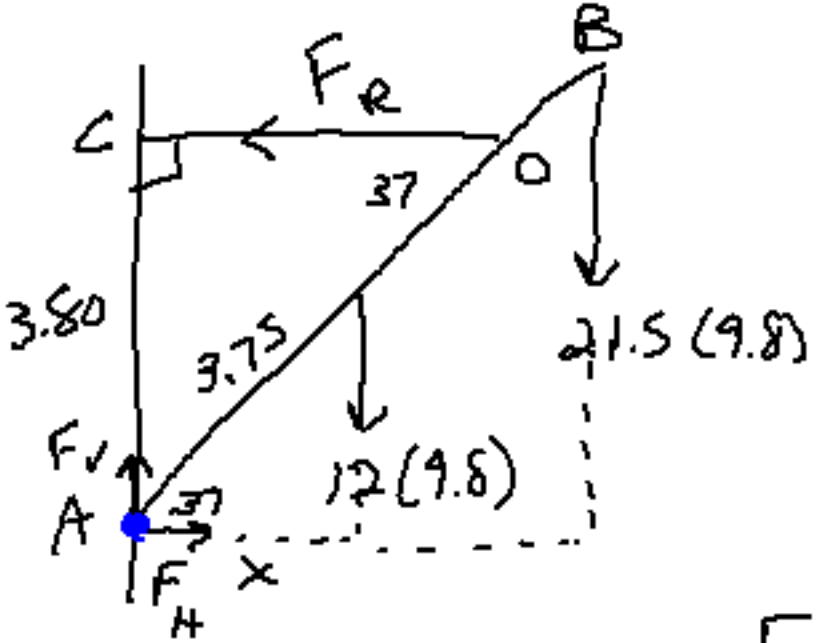
$\cos 30 = \frac{F_H}{794}$

$F_H = 688\,N$

$\tan 30 = \frac{x}{2.2}$

$x = 1.1$

p 249 #21



pole = 7.50 m

$12(9.8)(2.99) + 21.5(9.8)5.99 = F_R(3.8)$

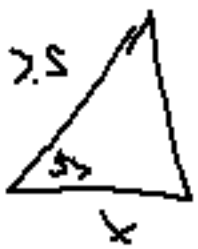
$F_R = 425\ N = F_H$

$F_V = 12(9.8) + 21.5(9.8)$

$F_V = 328\ N$

$\cos 37 = \frac{x}{3.75}$

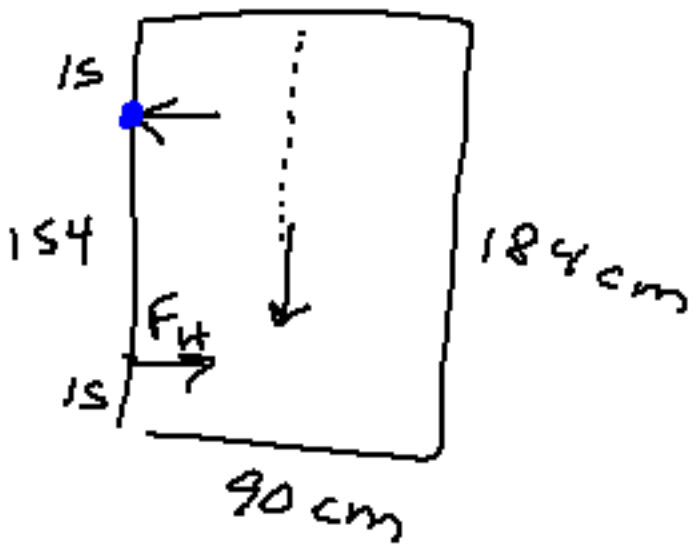
$x = 2.99$



$\cos 37 = \frac{x}{7.5}$

$x = 5.99$

A uniform door of mass 15.0 kg has a height of 184 cm and width 90.0 cm. Hinges are placed 15.0 cm from the top and bottom of the door. Find the horizontal force on each hinge. Include the direction.



$15(9.8)45 = F_H(154)$

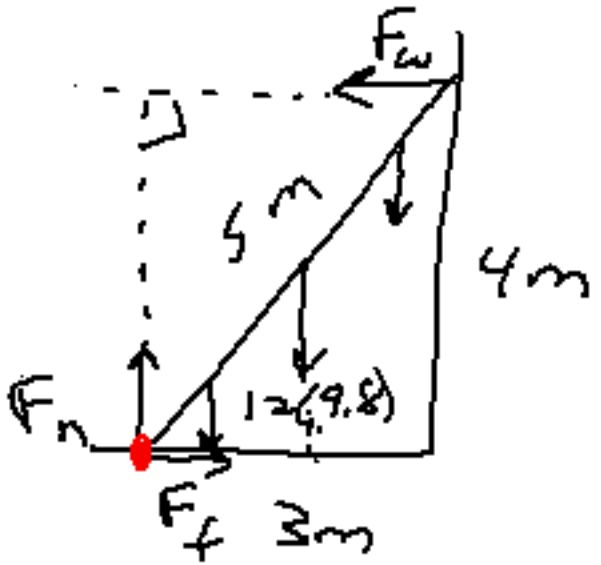
$F_H = 43.0\ N$

top Hinge $F = 43.0\ N$ left

bottom hinge $F = 43.0\ N$ right

p 246 question #7

P 233 EX 9-7



70.0kg person.

$12(9.8)(1.5) + 70(9.8)(1) = F_w(4)$

$F_w = 215.6 = F_f$

$F_n = 803.6$

$\mu = .268$

$12(9.8)(1.5) = F_w(4)$

$F_w = 44.1$

$F_n = 12(9.8) = 117.6\ N$

$F_f = 44.1\ N$

$F_f = \mu F_n$

$44.1 = \mu(117.6)$

$\mu = .375$

$F_f = 387.1$

$387.1 = \mu 803.6$

$\mu = .482$

p247

#20, 25, 27