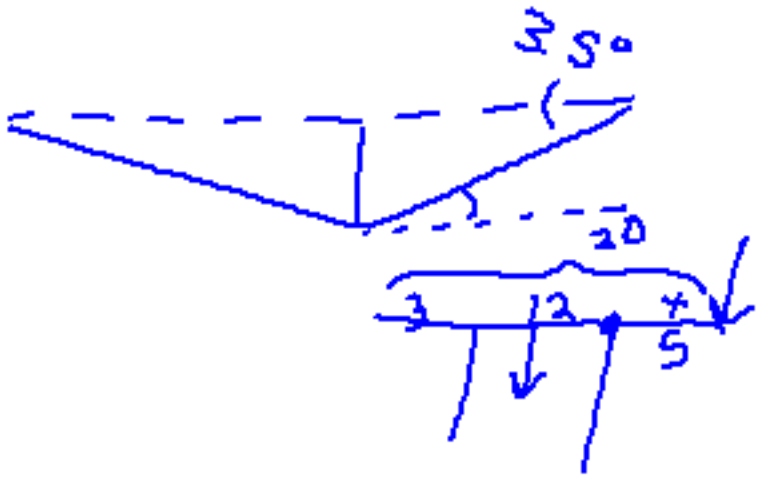
p247

20) a) 708 N
b) $F_v = 308$ N
$F_H = 580$ N

25) Horiz: 55.2 N
vert: 63.7 N

27) $\mu = .498$



5) 1096 N

8) $F_L = 3038$ N
$F_R = 1470$ N

14) 48.2 N

18) $F_T = 205$ N
$F_H = 157$ N, $F_V = 133$ N

68 a) 550 N
b) $F_A = 0$ $F_B = 1100$ N
c) $F_A = 137.5$ N, $F_B = 962.5$ N
d) $F_A = 687.5$ N, $F_B = 412.5$ N

71) $F_1 = 229$ N
$F_2 = 327$ N
b). 653 m from ft
c) 1.15 m "

72) each foot 109 N
each hand 259 N

Friday's worksheet

23) 2.33 m

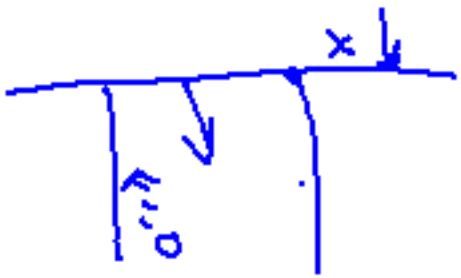
29) 3.60 N

31) $m_2 = .20\ kg$

$m_3 = .50\ kg$

$m_4 = .40\ kg$

35) 1.23 m from left end



36) $F_L = 572\ N$

$F_R = 261\ N$

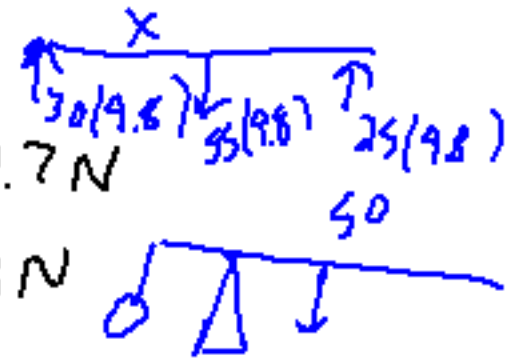
96) $F_L = 62720\ N$

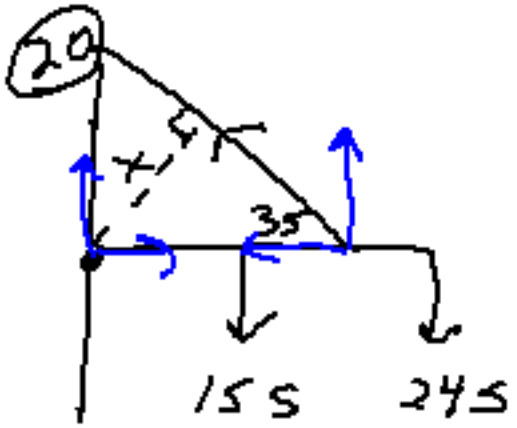
$F_R = 54860\ N$

102) .727 from head

107) hang cord 14.7 N

L cord 20.8 N





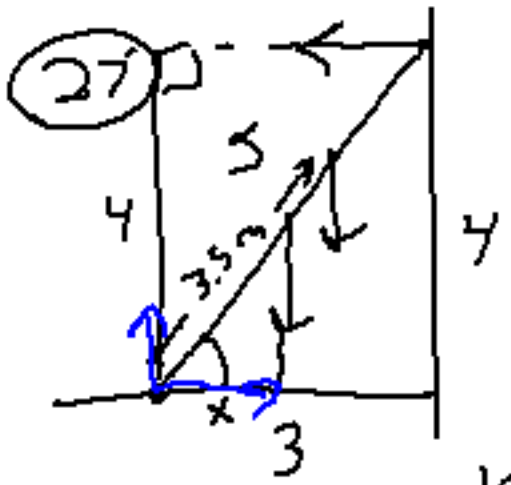
$$155(.85) + 245(1.7)$$

$$= F(.774)$$

$$F = 708$$

$$\sin 35 = \frac{x}{1.35}$$

$$x = .774$$



$$F_n = 12(9.8) + 55(9.8)$$

$$= 656.6$$

$$F_f = \mu F_n$$

$$327 = \mu(656.6)$$

$$\mu = .498$$

$$12(9.8)(1.5) + 55(9.8)(2.1) = F_w(4)$$

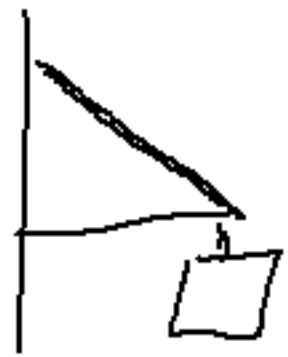
$$F_w = 327 = F_f$$

3 S.A. @ 3 = 9

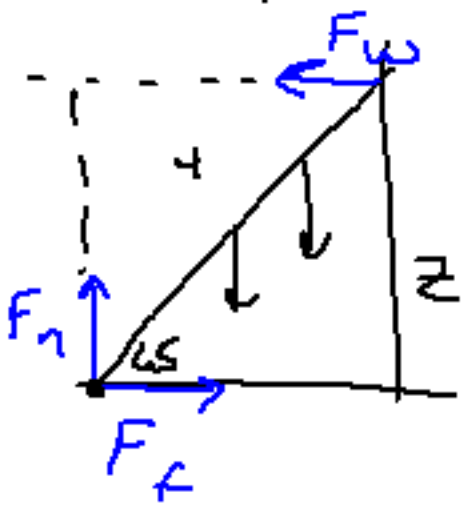
9 probs @ 10 pts ea = 90

99

Chandelier ✓
Seesaw ✓
X Scaffolds ✓
diving board ✓
Signs ✓
doors
ladders



4.00 m ladder, $\angle$ of 65.0°
with ground. $m = 30.0$ kg.
70.0 kg man climbs 3.00 m
up ladder before slips.
Find μ.



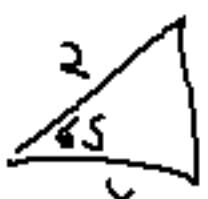
$F_n = 30(9.8) + 70(9.8) = 980$

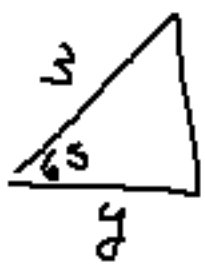
$30(9.8).845 + 70(9.8)1.27 = F_w(3.63)$

$F_w = F_f = 246.8 \; 308$

$\frac{308}{246.8} = \mu 980$

$\mu = .252 \; .315$





$x = .845$

$y = 1.27$ $Z = 3.63$