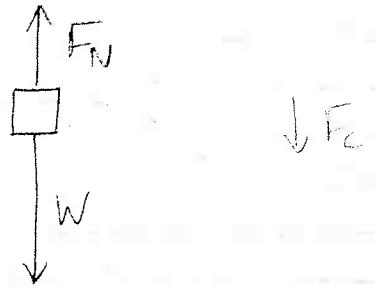
c) F_c is directed down (towards circle center)



$F_c = F_{net} = W - F_N$

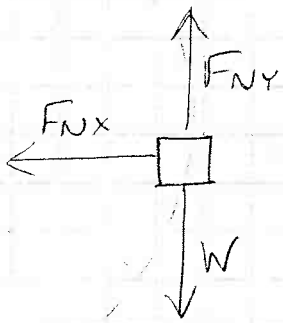
$F_c = 63.2\ N$ (from part b)
$W = 392\ N$

$F_c = W - F_N$

$63.2\ N = 392\ N - F_N$

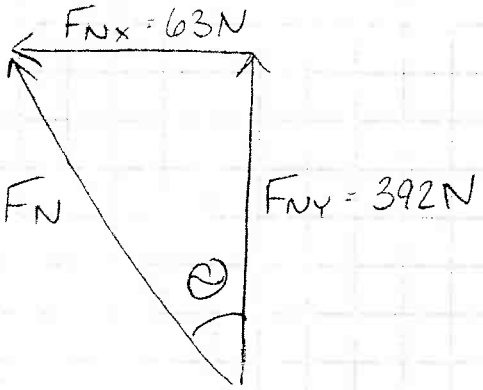
$\boxed{F_N = 329\ N}$

d) F_c is directed horizontally (towards circle center)



$F_c = F_{NX} = 63.2\ N$

$W = F_{NY} = 392\ N$



$F_N^2 = F_{NX}^2 + F_{NY}^2$

$F_N = \sqrt{(63.2N)^2 + (392\ N)^2}$

$\boxed{F_N = 397\ N}$

$\theta = \tan^{-1}\left(\frac{63.2N}{392\ N}\right)$

$\boxed{\theta = 9.2^\circ \text{ from the vertical}}$