Vertical Circles

Monday, January 29, 2018 11:20 AM



Circular Motion Page 1

rope Acat of mass 3.0 kg travels at constant speed of 4.0 m/s around a ferris wheel of Radius 6.0 m determine the normal rope Force at the top and bottom of the ride. F F=Fn-F Fg A cat of mars 4.0 kg is swung in a vertilal circle at 5.0 m/s at radius 1.5 m. Determine the force of tension in the top and bottom of the swing. $F_c = F_T - F_q$ $F_r = F_{\bar{1}} + F_{\bar{2}}$ Y' + mq = FTUpside down seats: Fg 4 - 4 (H) = Fn 1. fc = 4 (H) = Fn T=27.5N IFN 4(9.8)=106 N 4 4 Top Fr=Fg-FN Bottom Fc = Fn - Fg Fg FN Crazy stuff: Fg High speed jets:

Bottom

= mg - Fn mV

=21.4N

Circular Motion Page 2



Circular Motion Page 3

