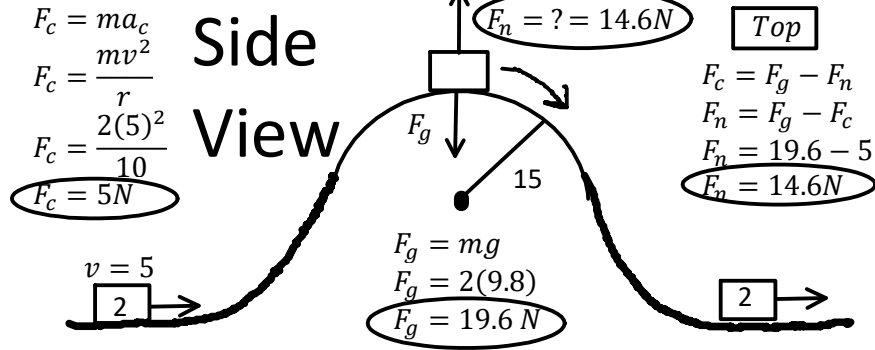


P12 - 7.7 - Hills Notes

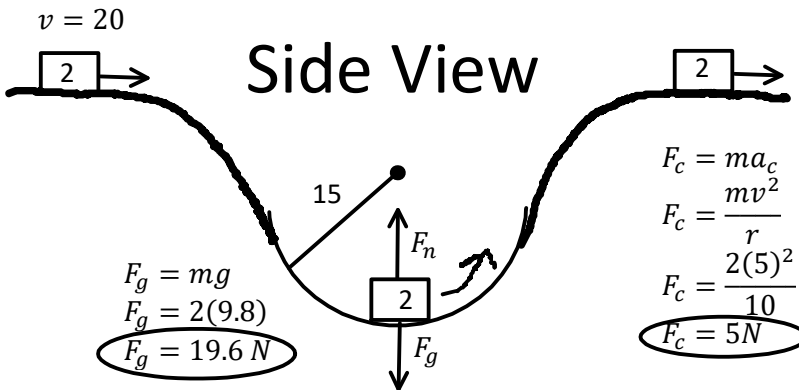
A 2kg cart goes over a circular hill of $r = 15$ at $5 \frac{m}{s}$. Find F_n at top.



Find the minimum v not to take air.

$F_c = F_g - F_n$
 ~~$\frac{mv^2}{r} = mg$~~ **$F_n = 0$**
 $v = \sqrt{gr}$
 $v = \sqrt{9.8(15)}$
 $v = 12.1 \frac{m}{s}$

A 2kg cart goes down a circular hill of $r = 15$ at $5 \frac{m}{s}$. Find F_n at bottom.



$F_c = F_n - F_g$
 $F_n = F_c + F_g$
 $F_n = 5 + 19.6$
 $F_n = 24.6N$