

CENTRIPETAL FORCE

Unit 14 Dr. John P. Cise,

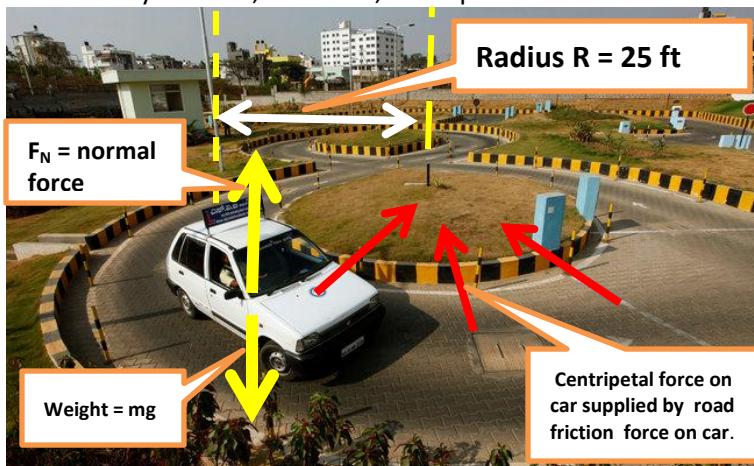
Professor of Physics , Austin Community College, 1212 Rio Grande St., Austin Tx. 78746 jpcise@austincc.edu & NYTimes March 5, 2012 by Stephanie Strom, Please send Dr Cise an e-mail on how you used this NYTimes physics application. Thanks!

Web Sites Shine Light on Petty Bribery Worldwide



Swati Ramanathan, a founder of the site I Paid a Bribe, in India.

e.g.: The cost of claiming a legitimate income tax refund in Hyderabad, India? 10,000 rupees.



(1) A track in Bangalore, India, **has automated** the testing for driver's licenses, **to avoid bribes.**

(2) The expense of obtaining a driver's license after having passed the test in Karachi, Pakistan? 3,000 rupees.

Ms. Ramanathan and her husband, Ramesh, along with Sridar Iyengar, set out to change all that in August 2010 when they started ipaidabribe.com, a site that collects anonymous reports of bribes paid, bribes requested but not paid and requests that were expected but not forthcoming. About 80 percent of the more than 400,000 reports to the site tell stories like the ones above of officials and bureaucrats seeking illicit payments to provide routine services or process paperwork and forms. "I was asked to pay a bribe to get a birth certificate for my daughter," someone in Bangalore, India, wrote in to the Web site on Feb. 29, recording payment of a 120-rupee bribe in Bangalore. "The guy in charge called it 'fees' " — except there are no fees charged for birth certificates, Ms. Ramanathan said. Now, similar sites are spreading like kudzu around the globe, vexing petty bureaucrats the world over. Ms. Ramanathan said nongovernmental organizations and government agencies from at least 17 countries had contacted Janaagraha, the nonprofit organization in Bangalore that operates I Paid a Bribe, to ask about obtaining the source code and setting up a site of their own.

INTRODUCTION: The centripetal force on this car is supplied by the frictional force between Car tire and asphalt road. The coefficient of friction between car tires and asphalt is measured at 0.72. The radius of the circular turn is 25 ft as seen in the picture at left. Friction $f = (\mu) F_N$, where (μ) = coefficient of friction and $F_N =$ normal force. On flat surfaces $F_N = mg$ as seen in free body diagram at left. Any centripetal force needed $= mv^2/R$. 60 mph = 88 ft/s

QUESTION: Find the maximum speed (in ft /s & mph) the car can make the turn and not slip (slide)?

HINT: Set up the working equation from the application of Newton's second law here.

ANSWERS: 24 ft/s or 16.4 mph