



Theoretical Mechanics, Quiz 7: PART INERT

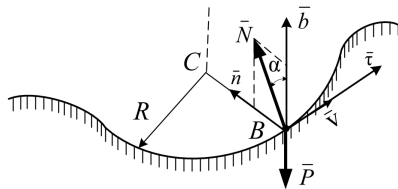
Particle Dynamics

Quiz 7

Determine the angle of deviation α from the vertical and the value of the pressure force \vec{Q} of the car on the rail of the railroad, when the car moves along the curve of radius R with constant speed V , if the mass of the car is equal to m .

Hints:

1. It's inverse dynamics problem (we know the trajectory).
2. Use natural form.
3. Task in 3D, but I give a que (look at the figure).



Task 1