Level 2

Catalysts

Calculate the position and the direction of the rover after driving a certain distance with a certain steering angle.

Input: WheelBase Distance SteeringAngle

(3 floating point numbers)

coordinate=distance of x and distance from origin and perpendicular

9.53, 8.12, 0.00

Output: x y NewDirection

(3 floating point numbers, rounded to two digits)

x,y … x,y position relative to starting position

NewDirection … 0 <= NewDirection < 360

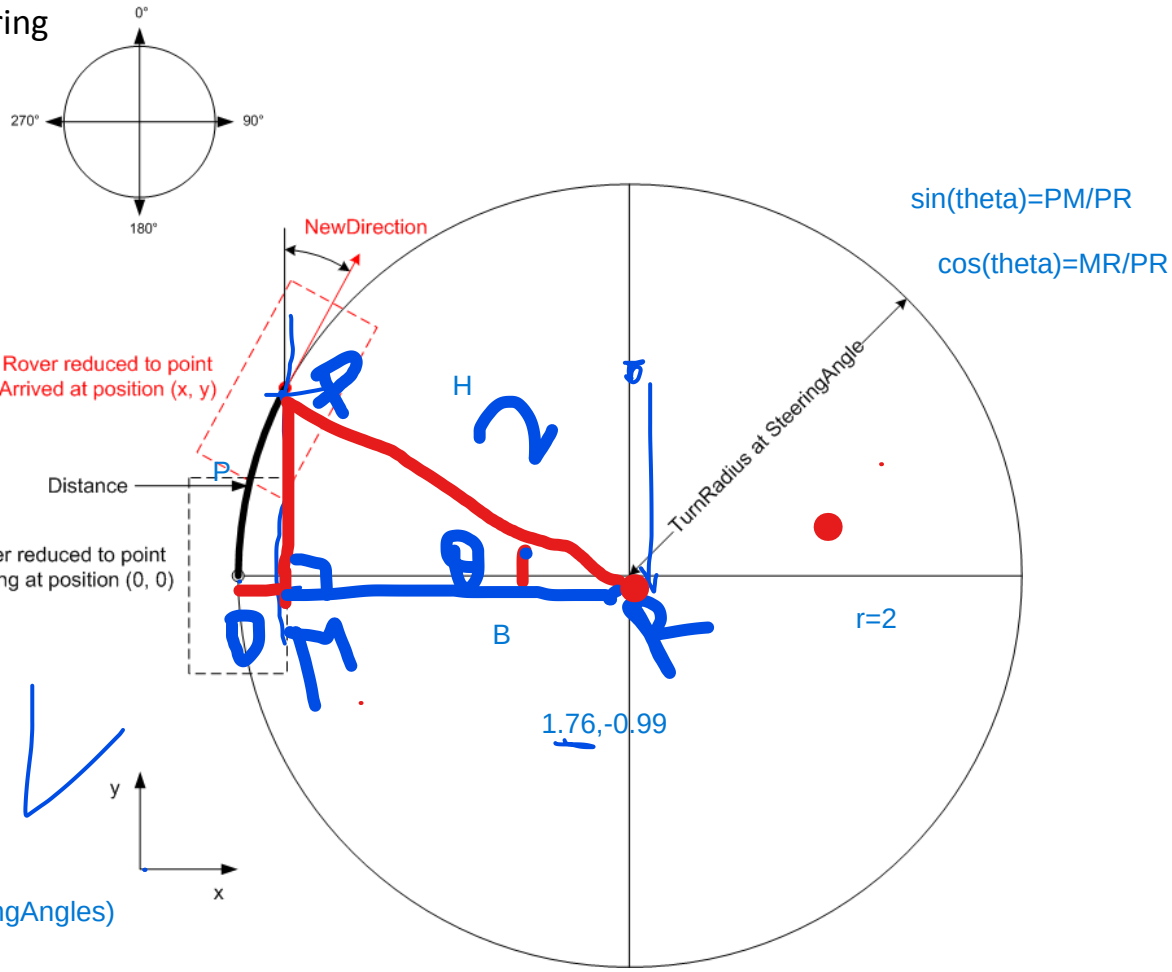
0,359

Example:

Input: 1.00 1.00 30.00

Output: 0.24 0.96 28.65

TurnRadius = WheelBase / sin (steeringAngles)



theta = arc_OP/PR

sin(theta)=PM/PR

cos(theta)=MR/PR