# Parametric Polar Quiz

1. The position of a particle moving in the -plane is given by the parametric equations and . What is the slope of the tangent line to the path of the particle at the point where ?
2. At time , a particle moving in the -plane has velocity vector given by . What is the total distance the particle travels between and ?
3. The position of a particle moving in the -plane is given by the parametric equations and . For what value(s) of is the particle at rest?
4. What is the slope of the line tangent to the polar curve at ?
5. What is the area inside the polar curve and outside the polar curve ?