

## Parametric curves

1. A disk of radius 2 cm slides at a speed  $12\sqrt{2}$  cm/sec in the direction of  $\langle 1, 1 \rangle$ . As it slides it spins counterclockwise at 3 revolutions per second. Measuring time in seconds, at time  $t = 0$  the disk's center is at the origin  $(0,0)$ .

Find parametric equations for the trajectory of the point  $P$  on the edge of the disk, which is initially at  $(2, 0)$ .

MIT OpenCourseWare  
<http://ocw.mit.edu>

18.02SC Multivariable Calculus  
Fall 2010

For information about citing these materials or our Terms of Use, visit: <http://ocw.mit.edu/terms>.