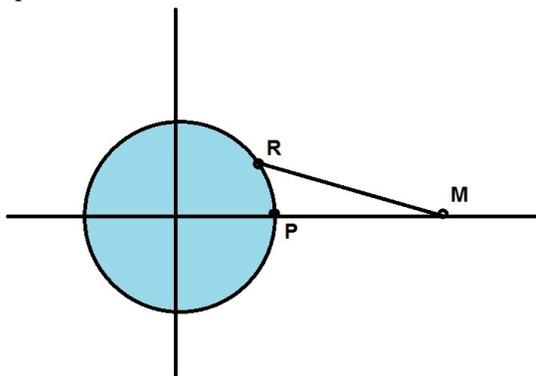


Math 124, Fall 2018, Quiz 2

October 9, 2018

Name and Section _____

Pierre and Marie are out riding their bikes. At $t = 0$, Marie starts at point $M(24, 0)$ and rides towards the point $R(12, 5)$ in straight line with constant velocity at 26 kilometers per hour. Pierre starts riding his bike at P around the circular lake in a constant speed counterclockwise at $t = 0$ and they bump into each other at the point R .



1. (6 points) Find parametric equations for Marie's motion. Your answer should be of the form

$$x = at + b \quad y = ct + d$$

with a, b, c, d numbers. Round your numbers, if necessary, to two digits after the decimal.

2. (4 points) Find parametric equations for Pierre's motion. Your answer should be of the form

$$x = a + r \cos(\omega t) \quad y = b + r \sin(\omega t)$$

with a, b, r, ω numbers. Round your numbers, if necessary, to two digits after the decimal.