

Math 53: Multivariable Calculus Discussion Section 105 & 107

GSI: Catherine Cannizzo

Email: cannizzo@math.berkeley.edu

Text: *Multivariable Calculus: Early Transcendentals for UC Berkeley*, 7th ed, by Stewart

Course instructor: Professor Auroux

Course webpage: math.berkeley.edu/~auroux/53f13/

HW: Due at the start of each Wednesday section, starting September 11. The two lowest scores are dropped. Late homework can't be accepted.

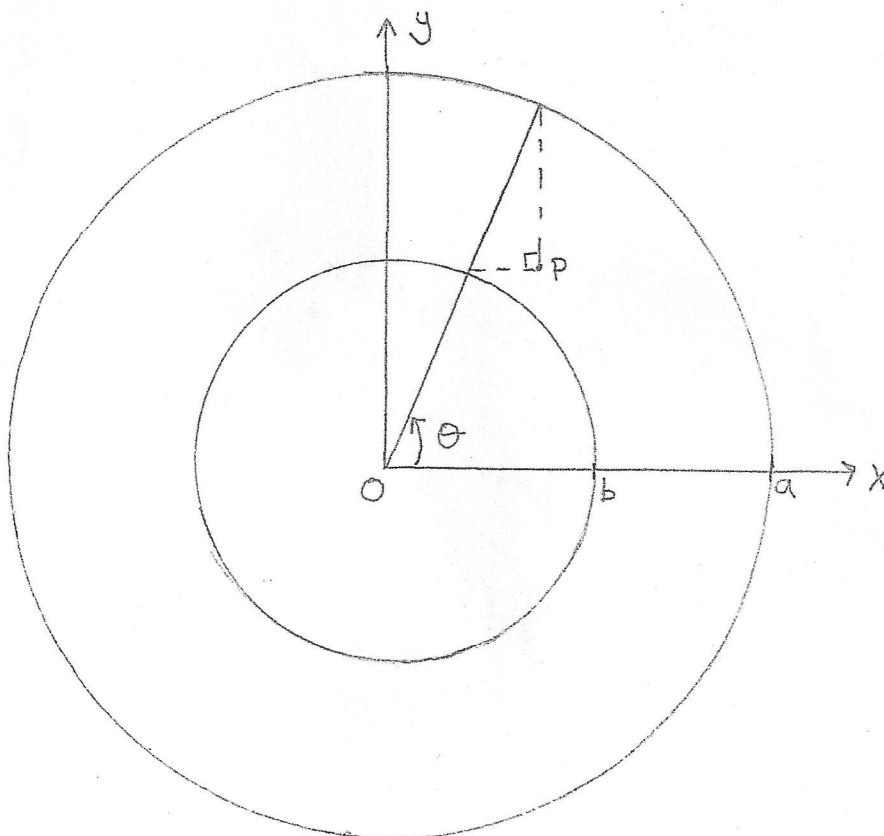
Quizzes: Given weekly in Monday sections, starting September 9. The two lowest scores are dropped.

Practice Problems: Section 10.1 of textbook

21) Describe the motion of a particle with position (x, y) as t varies in the given interval.

$$x = 5 \sin(t), \quad y = 2 \cos(t), \quad -\pi \leq t \leq 5\pi$$

41) In the diagram below, a and b are fixed numbers. Find parametric equations for the curve traced out by P , where θ is the parameter. (The two dotted lines must remain parallel to the x -axis and y -axis as θ varies.) Then eliminate the parameter and identify the curve.



25) Use the graphs of $x = f(t)$ and $y = g(t)$ to sketch the parametric curve $x = f(t), y = g(t)$. Indicate with arrows the direction in which the curve is traced as t increases. Can you say anything about the tangent line to the curve at the point $(-1, 0)$?

