

Math 124 Quiz 1 Winter 2002

Name:

Problem 1. (3 points) Calculate the period of the function $d(t) = -2\sin(2t - \pi) + 3$.

Problem 2. (3 points) Suppose $g(x) = 1 - \sqrt{x}$. What is the domain of $g \circ g$?

Problem 3. (5 points) Convert the graph of $y = \cos x$ over the domain $[0, 2\pi]$ to the graph of $y = \cos(2\pi(x - \pi/2))$. Show all intermediate graphs separately, label everything and say in words what happened at each stage. In particular, label the domains of all the graphs.

Problem 4. (4 points) Set up the equation whose solution gives the slope of the tangent line to $y = -x^2$ passing through the point $\mathbf{P} = (5, -1)$. Draw a picture showing the conic, the tangent line and the point \mathbf{P} .