**Section** _____ **Name** _____

**TA** _____ **Student Number** _____

**Math 126B** **Calculus With Analytic Geometry III** **Spring 1995**

PROFICIENCY QUIZ #3

5/25/95

There are four problems on this quiz. You have 25 minutes. Only correct answers count. You do not need to show your work.

1. $f(y,z) = \sin(yz) + ze^y$ Find $f_{yy}$.

$f_{yy} =$ ____

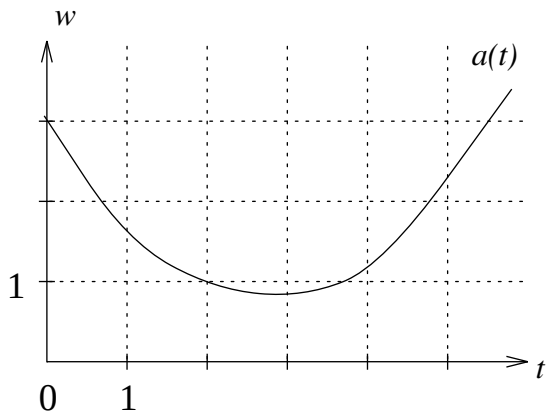
2. The function $b(u)$ is given by $b(u) = \sin u$. We define a new function $g(x,y)$ by $g(x,y) = b(x^2 - y^2)$. Find $g_y$.

$g_y =$ ____

(over)

3. $f(x,y) = e^{x+y}$, and $a(t)$ is the function whose graph is shown below. Evaluate the derivative $\dfrac{df(a(t),a(t))}{dt}$ for $t = 2$. Your answer will be a number.

$$\frac{df(a(t),a(t))}{dt} = \boxed{\phantom{00}}$$




4. We do not know the formula for $h(x,y)$. Find $\dfrac{\partial h(\sin u, \cos(uv))}{\partial u}$.

$$\frac{\partial h(\sin u, \cos(uv))}{\partial u} = \boxed{\phantom{00}}$$