Section _____ **Name** _____

TA _____ **Student Number** _____

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

PROFICIENCY QUIZ #2

5/18/95

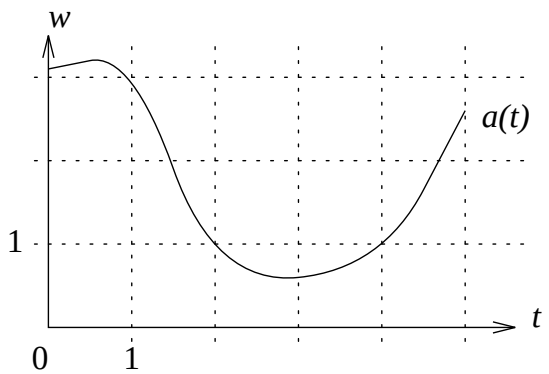
There are four problems on this quiz. You have 25 minutes. Only correct answers count. You do not need to show your work.

1. $g(u, v) = 3u^2v^2 + \sin v \cos u$. Find g_v.

$g_v =$ ____

2. The function $a(t)$ is given by its graph shown below. We define a new function $g(x, y)$ by $g(x, y) = a(x^3 + y^2)$. Find $g_x(1, \sqrt{3})$. Your answer will be a number.

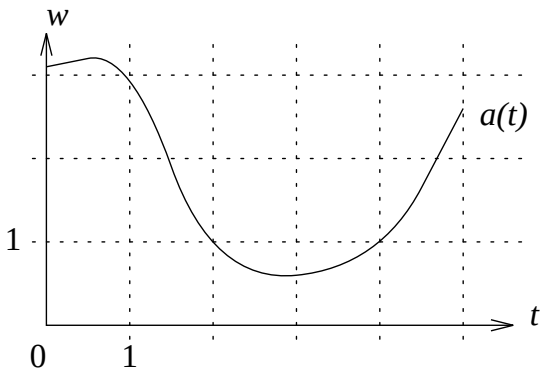
$g_x(1, \sqrt{3}) =$ ____



(over)

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

$$\frac{dh(a(t),3t)}{dt} = \boxed{}$$



4. $f(x,y) = \sin x \cos y$. Find $\dfrac{\partial f(u^2, a(u,v))}{\partial v}$, where $a(u,v) = u + v^2$.

$$\frac{\partial f(u^2, a(u,v))}{\partial v} = \boxed{}$$