

Quiz 3**Calculus 1****10/8/2012**

Each problem is worth 5 points. Clear and complete justification is required for full credit.

1. If $f(x) = (\sin x)^3$, what is $f'(x)$?

$$f(x) = (\sin x)^3$$

$$f'(x) = 3(\sin x)^2 \cdot \cos x$$

$$= \underline{3 \cos x (\sin x)^2}$$

Great

2. If $g(x) = \ln(\cos x)$, what is $g'(x)$?

$$g(x) = \ln(\cos x)$$

$$g'(x) = \frac{1}{\cos x} \cdot -\sin x$$

$$= \frac{-\sin x}{\cos x}$$

$$= \underline{-\tan x}$$

Excellent!