Mathematics 122

Quiz #33 Name: Key

You must show your work to get full credit.

(1) Find an antiderivative of $f(t) = 3t^4 + 2t + 1$.

2 pts

$F(t) = \frac{3}{5}t^5 + t^2 + t$

(2) If a is a constant compute $\int 6aq^2\,dq$ $2aq^3$

2 pts

$= \frac{6a}{3}q^3 = 2aq^3$

不 this is ok

(3) If a is a constant compute $\int_0^2 6aq^2\,dq$ $16a^3$

1 pt.

From (2)

$\int_0^2 6aq^2\,dq = 2aq^3\Big|_{q=0}^{2} = 2a(2)^3 - 2a(0)$

$= 16a - 0$

$= 16a$

This is ok.