Mathematics 122

Quiz #13 Name: Key

You must show your work to get full credit.

Compute the following derivatives:

1. $w = 3z + 9$.

$\frac{dw}{dz} =$ 3

2. $y = 5x^2 + 7\pi^3$.

$y' =$ $10x$

3. $y = 3x^4 - 6x^3 - 24x^2 + 36x - 8$.

$y' =$ $12x^3 - 18x^2 - 4x + 36$

4. $A = 4r^3 - \frac{6}{r^2} = 4r^3 - 6r^{-2}$

$\frac{dA}{dr} =$ $12r^2 + 12r^{-3}$

or

$\frac{dA}{dr} = 12r^2 + \frac{12}{r^3}$