Mathematics 122 Quiz 18 Name: Key

Let a, b and c be constants. This means that their derivatives are zero. In particular

$$(4a^2b^6)' = 0, \qquad \left(\frac{7a}{c^4}\right)' = 0, \qquad \frac{d}{dt}5a^2e^t = 5a^2e^t \qquad \text{etc.}$$

Compute the following derivatives:

(1) $y = 7e^x$

1 pt

$y' =$ $7e^x$

(2) $C = 9(4)^q$

1 pt

$\frac{dC}{dq} =$ $\ln(4)9\ (4)^8$

(3) $P(t) = 6\ln(t)$

1 pt

$P'(t) =$ $\frac{6}{t}$

(4) $w = \frac{6ab^2}{z^3} + ce^z$

$= 6ab^2z^{-3} + ce^z$

1 pt

$\frac{dw}{dz} =$ $-18ab^2z^{-4} + ce^z$

(5) $y = a^3\ln(x)$

1 pt

$\frac{dy}{dx} =$ $\frac{a^3}{x}$