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

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

Compute the following derivatives:

1. $y = 7e^x$
   
   \[
y' = 7e^x
   \]

2. $C = 9(4)^q$
   
   \[
dC \over dq = \ln(4) 9 (4)^q
   \]

3. $P(t) = 6 \ln(t)$
   
   \[
P'(t) = \frac{6}{t}
   \]

4. $w = \frac{6ab^2}{z^3} + ce^z$
   
   \[
dw \over dz = -18ab^2 z^{-4} + ce^z
   \]

5. $y = a^3 \ln(x)$
   
   \[
dy \over dx = \frac{a^3}{x}
   \]