

7. [5 points] A function $g(x)$ is given by the following formula, where K and M are constants:

$$g(x) = \begin{cases} Ke^{-x+5} & x \leq 5 \\ M + \sqrt{x+4} & x > 5. \end{cases}$$

Find all values of K and M so that $g(x)$ is differentiable on $(-\infty, \infty)$. Write NONE if there are no such values. You do not need to simplify your answers, but show your work clearly.

Answer: $K =$ _____ and $M =$ _____