7. [5 points] Let
\[ s(t) = \begin{cases} 
5t^2 & \text{if } t \leq 3 \\
p + c(t - 3) & \text{if } t > 3 
\end{cases} \]
be a differentiable function, where \( p \) and \( c \) are constants.

a. [3 points] Find the values of \( p \) and \( c \).

Answer: \( p = \) \( \) and \( c = \) \( \)

b. [2 points] Is \( s'(t) \) differentiable at \( t = 3 \)?

To receive any credit on this question, you must justify your answer.

8. [6 points] Find a formula for \( \frac{dy}{dx} \) for the implicit function \( ax^2 + xy^2 + b\ln y = c \).

The constants \( a, b, \) and \( c \) may appear in your answer.

Answer: \( \frac{dy}{dx} = \) \( \)