6. [11 points] For each equation below, solve exactly for the specified variable. Show your work step-by-step and write your answers in exact form in the answer blanks provided.
a. [4 points] $\quad 12.1 e^{0.15 p}=0.78(0.9)^{p}$

## Answer: $p=$

$\qquad$
b. [4 points] $\frac{\ln \left(z^{7}\right)-\ln \left(z^{4}\right)}{\ln (50)}=5$

## Answer: $z=$

c. [3 points] $\ln \left(10 e^{-5 n}\right)=3 n+2$

