**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]  $12.1e^{0.15p} = 0.78(0.9)^p$ 

Answer: 
$$p =$$

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

Answer: z =

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