

2. [12 points] For each equation below, solve EXACTLY for the specified variable. Show your work carefully and write your final answer on the answer blank provided.

a. [4 points] If  $5e^{2t+3} = 6$ , solve for  $t$ .

**Answer:** The exact value of  $t$  is \_\_\_\_\_.

b. [4 points] If  $\ln(3^x) = \ln(2^x) + 7$ , solve for  $x$ .

**Answer:** The exact value of  $x$  is \_\_\_\_\_.

c. [4 points] If  $\log(w + 1) - \log(2 - w) = 2$ , solve for  $w$ .

**Answer:** The exact value of  $w$  is \_\_\_\_\_.