Answer on Question #59851, Chemistry / General Chemistry

1. What is the pOH of a 0.848 M solution of citric acid (Ka = 3.2 x 10^{-7}) ? (3 dec places)

Solution:

$[H^+] = \sqrt{(Ka \times C_M)}$ - for weak acid

$[H^+] = \sqrt{(3.2 \times 10^{-7} \times 0.848)} = 5.208 \times 10^{-4}$

pH = -log[H^+]

pH = -log [5.208×10^{-4}] = 3.283

pOH = 14 − pH

pOH = 14 − 3.283 = 10.717

Answer: pOH = 10.717 .