

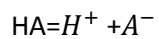
Answer on Question 82832 in General Chemistry

$$.n(\text{HA}) = 0.139 \text{ mol}$$

$$.pH = 1.22$$

$$K_a = ?$$

HA-weak acid which dissociates by the equation



$$K_a = \frac{[\text{H}^+] \times [\text{A}^-]}{[\text{HA}]}$$

Not difficult to see  $[\text{H}^+] = [\text{A}^-]$

$$K_a = \frac{[\text{H}^+]^2}{[\text{HA}]}$$

$$[\text{H}^+] = 10^{-pH} = 10^{-1.22} = 0.0603$$

$$K_a = \frac{0.0603^2}{0.139} = 2.62 \times 10^{-2}$$

Answer provided by [www.AssignmentExpert.com](http://www.AssignmentExpert.com)