

Sample pH problem (in reverse)

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$$-\log[\text{H}_3\text{O}^{1+}] = 2.30$$

$$[\text{H}_3\text{O}^{1+}] = 10^{-\text{pH}} = 10^{-2.30} = 5.0 \times 10^{-3} \text{ M}$$

Therefore, the initial

$$[\text{HCl}] = 5.0 \times 10^{-3} \text{ M}$$