

STEP 2 Calculate [free chlorine]

MeO

pool water

$$C_1 V_1 = C_2 V_2$$

$$0.00153 \times 0.767 = C_2 \times 0.633$$

$$[OCl^-] \Rightarrow C_2 = \underline{\underline{0.00185 M}}$$

YOUR DATA GOES HERE.

STEP 3

BUT

we don't use MOLARITY to discuss pool chlorine strength.

We use PARTS PER MILLION or ppm

So Molar Mass of $OCl^- = 51.5 \text{ g/mol}$.

$$0.00185 \frac{\text{mol}}{\text{L}} \times \frac{51.5 \text{ g}}{\text{mol}} \times \frac{1000 \text{ mg}}{\text{g}}$$

$$= 95.28 \text{ mg/L}$$

$$\text{or } \boxed{95.28 \text{ ppm}}$$

same step everytime.

Then you would compare this value to accepted values and your other pool samples.

NOTE: - this chlorine was much too strong to be a pool. I should have made it between 1-3 ppm

BUT this would be hard to test with this method so it's ok for your trials.

I put 5mL NaOCl (bleach) into 500ml of water