

TURN YOUR TEXT
BOOK TO P. 584

- Purpose calculate pH

Warmup calculate these!

#1	X	LOG[X]
	3.5	0.54
	0.110	-0.959
	120	2.09

#2 LOGS AND SIG FIGS

0.110

↑
three
S.F.

$$\log(0.110) = -0.959$$

↑
three

not a
sig fig

#3 pH stands for "parts hydrogen"

Formula

$$\text{pH} = -\log[\text{H}^+]$$

example

[H ⁺]	pH
4.88×10^{-4}	3.312

$$1.002 \times 10^{-2} \quad | \quad 2.999$$

$$6.30957 \times 10^{-8} \quad | \quad 7.2$$

$$6 \times 10^8$$

#4 Other formula

$$[\text{H}^+][\text{OH}^-] = 1.0 \times 10^{-14}$$

How
TO
SOLVE
#11,
the hardest
problem
from
tonight's
homework.

① FIND $[H^+]$

Formula

$$\frac{[H^+][OH^-]}{[OH^-]} = \frac{1 \times 10^{-14}}{[OH^-]}$$

$$[H^+] = \frac{1.0 \times 10^{-14}}{[OH^-]}$$

$$[H^+] = \frac{1.0 \times 10^{-14}}{0.000700}$$

$$[H^+] = 1.4 \times 10^{-11}$$

② FIND pH

$$pH = -\log [H^+]$$

$$pH = -\log [1.4 \times 10^{-11}]$$

$$pH = +10.84$$

SKIP 8, 9, 10