Lauren Gavin Gilliam
College Algebra
pg 348
17, 24, 27, 28, 29

17 A $pH = 3.8$ $pH = 2.8$ $pH = -\log[H^+]$

$3.8 = -\log[H^+]$
$10^{-3.8} = [H^+] = 1.58 \times 10^{-4}$
$= .000158$

$2.8 = -\log[H^+]$
$10^{-2.8} = [H^+]$
$= .00158$

B the wine with the higher pH (3.8) has a lower hygrogen ion concentration. It is more basic.

24 $M = 8.3$ $M = 4.9$ $M = \log \frac{I}{10^{-4}}$

$8.3 = \log \frac{I}{10^{-4}}$
$10^{8.3} = I/10^{-4}$
$= 19952.6$

$4.9 = \log I/10^{-4}$
$10^{4.9} = I/10^{-4}$?
$10^{.9} = I$

Sarah Larkins
Stacy Beller
Raina Shoemaker

p. 348 #17, 24, 27, 28, 29

#17) a) pH = 3.8, pH = 2.8

$pH = \log_{10}[H^+]$
$3.8 = \log_{10}[H^+]$
$[H^+] = 10^{-3.8}$

$pH = \log_{10}[H^+]$
$2.8 = \log_{10}[H^+]$
$[H^+] = 10^{-2.8}$

b) california

#24) $8.3 = \log \frac{I}{S}$

$10^{8.3} = I/S$
$I = 10^{8.3}(S)$

$4.9 = \log I/S$

$10^{4.9} = I/S$
$I = 10^{4.9}(S)$

$\frac{10^{8.3}(S)}{10^{4.9}(S)} = 2511.89$

Landen Thieman/Lindy Pearson
p. 348 17, 24, 27, 28, 29

17. A) $1.58 \times 10^{-4} = 10^{-3.8}$
$.0016 \times 10^{-2.4} = 10^{-2.8}$
B) 2.8 wine has lower acidic

24. $\dfrac{\log \frac{8.3}{10^{-4}}}{\log \frac{4.9}{10^{-4}}} = 1.049$ times bigger

27. A) $-2.5 \log(B) - -2.5 \log(B_0)$
B) $-2.5 \log(10) - -2.5 \log(1)$
$-2.5 - 0 = -2.5$

Steaven, Taylor, & Brendon

pg. 348 #17, 24, 27, 28, 29

17. a) $pH = -\log[H^+]$ $\quad$ $pH = -\log[H^+]$

$3.8 = -\log[H^+]$ $\quad$ $2.8 = -\log[H^+]$

$-3.8 = \log_{10}[H^+]$ $\quad$ $-2.8 = \log_{10}[H^+]$

$10^{-3.8} = [H^+]$ $\quad$ $10^{-2.8} = [H^+]$

$.00016 = H$ $\quad$ $.0016 = H$

b) Red wine

24. $M = \log\left(\frac{I}{10^{-4}}\right)$ $\quad$ $M = \log\left(\frac{I}{10^{-4}}\right)$

$M = \log\left(\frac{8.3}{10^{-4}}\right)$ $\quad$ $M = \log\left(\frac{4.9}{10^{-4}}\right)$

$M = \log(4.919)$ $\quad$ $M = 4.6902$

less than half intensity

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

Jerry Lunning, Markeese p. 348 #17, 24, 27, 28, 29

(17) a) $3.8 = -\log[H^+]$

$-3.8 = \log[H^+]$

$10^{-3.8} = [H^+]$

$2.8 = -\log[H^+]$

$-2.8 = \log[H^+]$

$10^{-2.8} = [H^+]$

b) The pH of 3.8

(24) $8.3 = \log\left(\frac{I}{10^{-4}}\right)$

$10^{8.3} = 10^{\log\left(\frac{I}{10^{-4}}\right)}$

$10^{8.3} = \left(\frac{I}{10^{-4}}\right)$

$10^{4.3} = I_1$

$4.9 = \log\left(\frac{I}{10^{-4}}\right)$

$10^{4.9} = 10^{\log\left(\frac{I}{10^{-4}}\right)}$

$10^{4.9} = \left(\frac{I}{10^{-4}}\right)$

$10^{.9} = I_2$

$10^{3.4}$ times greater

2,511.89 times greater

(27) a) $M = -2.5\log\left(\frac{B}{B_0}\right)$

$M = -2.5\log(B_0) - 2.5(B)$

b)

Jackson
Chase

17. A) C = .0001585
I = .00015844 C = 3.8
I = 2.8

B) California

24. 19.944.6798

27.

$pH = -\log[H]$

$3.8 = -\log[H^+]$

$-3.8 = \log[H^+]$

$10^{-3.8} = 10^{\log[H]}$

$10^{-3.8} = H^+$

$C = .0001585 = H^+$

$8.3 = \log\left(\frac{I}{10^{-4}}\right)$

$10^{8.3} = 10^{\log\left(\frac{I}{10^{-4}}\right)}$

$10^{8.3} = \frac{I}{10^{-4}}$

$10^{8.3} \cdot 10^{-4} = I$

19,952.6231
− 7.9433
19,944.6798