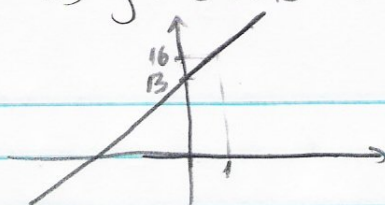


P.2 #54 $y-1 = 3(x+4) \Rightarrow y = 3x+13 \rightarrow$ line with y-intercept 13 slope 3.



#62. $3x+4y=7 \Rightarrow y = -\frac{3}{4}x + \frac{7}{4}$

parallel line has slope $-\frac{3}{4}$, passing through $(-6, 4) \Rightarrow y-4 = -\frac{3}{4}(x+6)$

perpendicular line has slope $\frac{4}{3}$, " " " $\Rightarrow y-4 = \frac{4}{3}(x+6)$

#80. $\left. \begin{array}{ll} \text{Year } 0 & \text{value } \$875 \\ \text{Year } 5 & \text{value } \$0 \end{array} \right\} V = my + b$

a) $m = \frac{875-0}{0-5} = -175 \text{ \$ / year}$

$V-0 = -175(y-5) \Rightarrow V = -175y + 875$

b) when $y=2$, $V = -175 \times 2 + 875 = 525 \text{ dollars}$.

c) $V=200 \Rightarrow 200 = -175y + 875$
 $y = \frac{675}{175} = 3.86 \text{ years}$.

P3 #20. $f(x) = \sqrt{x^2-3x+2}$ Domain: $x^2-3x+2 \geq 0$
 $(x-1)(x-2) \geq 0$

Domain is $(-\infty, 1] \cup [2, \infty)$

#22. $h(x) = \frac{1}{\sin x - \frac{1}{2}}$

Domain: $\sin x - \frac{1}{2} \neq 0 \Rightarrow \sin x \neq \frac{1}{2}$

$\sin x = \frac{1}{2}$ when $x = 30^\circ, 150^\circ$ or $\frac{\pi}{6}, \frac{5\pi}{6}$

More accurately domain is all $\mathbb{R}$ except
 $x = \frac{\pi}{6} + 2k\pi$ or $x = \frac{5\pi}{6} + 2k\pi$