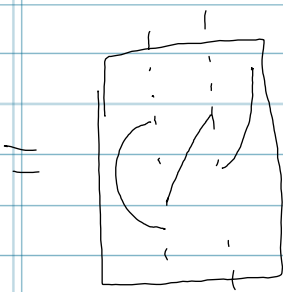
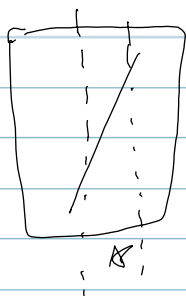


Prof. Kinade

February 27

Section 3.4 → Piecewise Functions

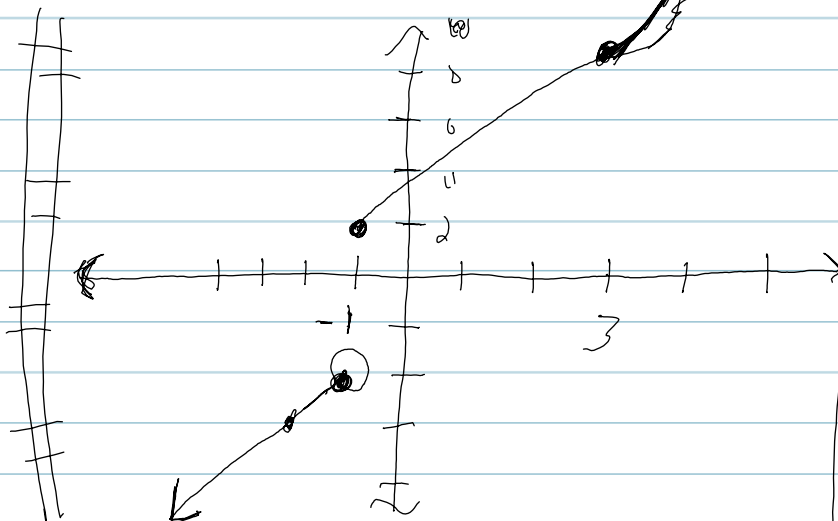
$$f(x) = \begin{cases} x - 1 & , x < -1 \\ 2x & , -1 \leq x < 3 \\ x^2 & , x \geq 3 \end{cases}$$



• Graph, evaluate, and find domain and range.



• { Line
Line
Parabola }

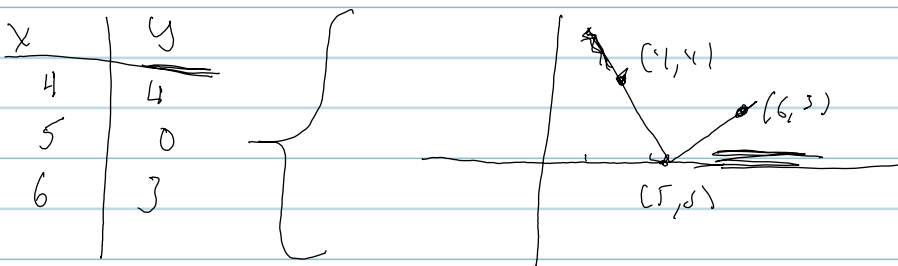


$$\begin{aligned} f(x) &= x - 1 \\ & x < -1 \\ f(-1) &= -1 - 1 = -2 \\ f(-2) &= -2 - 1 = -3 \\ \hline f(x) &= 2x + 3 \\ & -1 \leq x < 3 \\ f(-1) &= 2(-1) + 3 = 1 \\ f(3) &= 6 + 3 = 9 \\ \hline f(x) &= x^2 \\ & x \geq 3 \end{aligned}$$

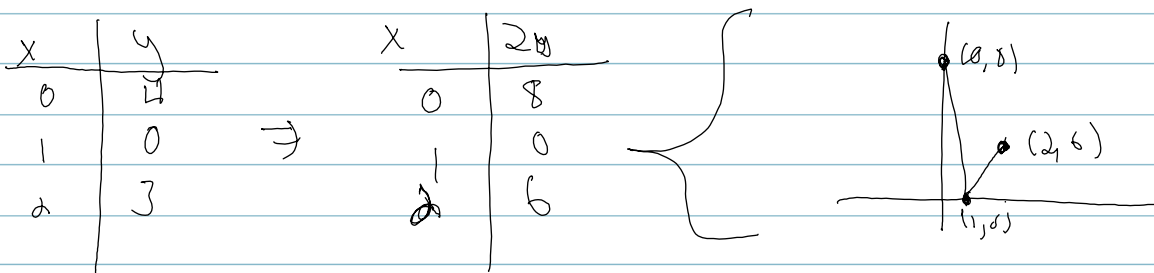
• $f(3) = 9$
 $f(3) = 6$

$D = \text{[scribble]} (-\infty, \infty)$
 $R = (-\infty, -1) \cup [1, \infty)$

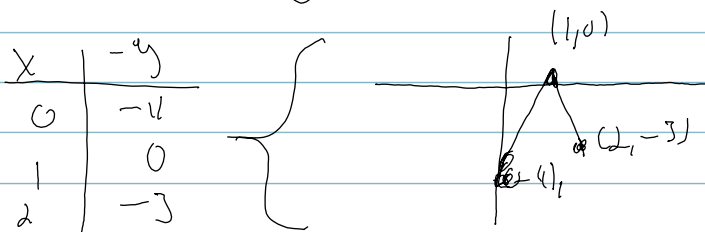
• $F(x-4) \Rightarrow$ "x" value, $-4! \Rightarrow$ Add 4 to each input



• $2F(x) \Rightarrow 2 \cdot (y)!$
 \hookrightarrow "y"



• $-F(x) \Rightarrow -y!$



• $F(-x)$

