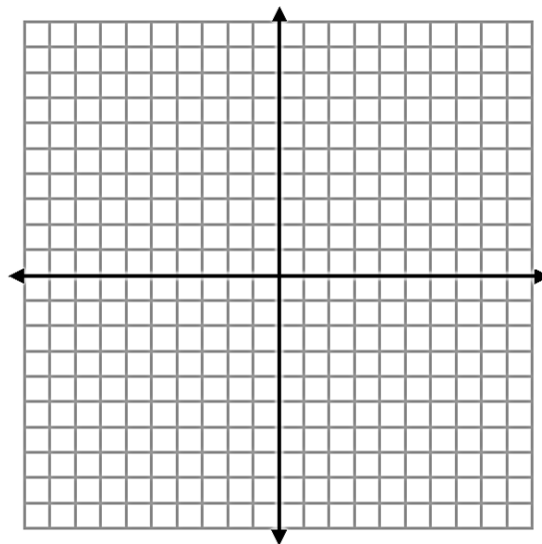
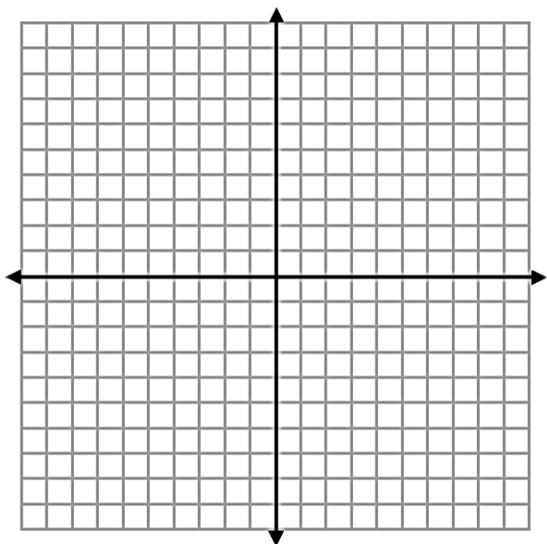


1.2 Notes: Graphs of Piecewise Functions

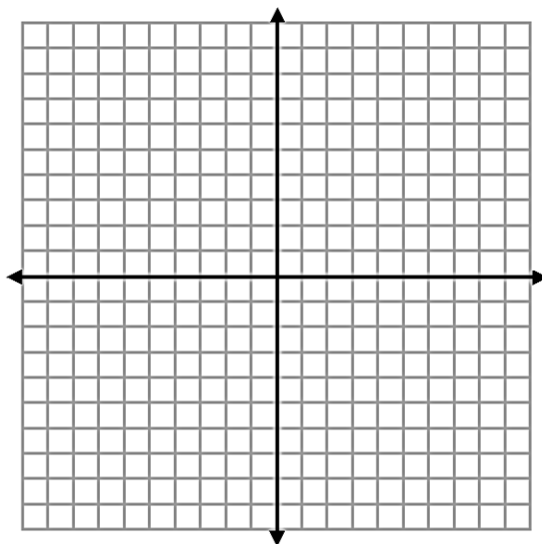
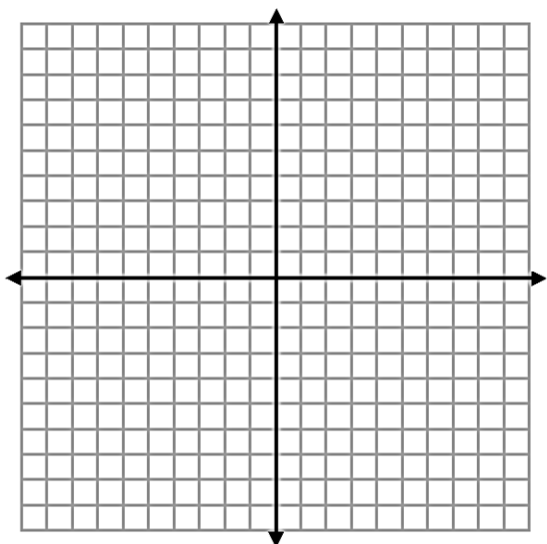
1.  $f(x) = \begin{cases} 1-x, & x \leq 1 \\ x^2, & x > 1 \end{cases}$

2.  $f(x) = \begin{cases} 2x+3, & x < 0 \\ 3-x, & x \geq 0 \end{cases}$

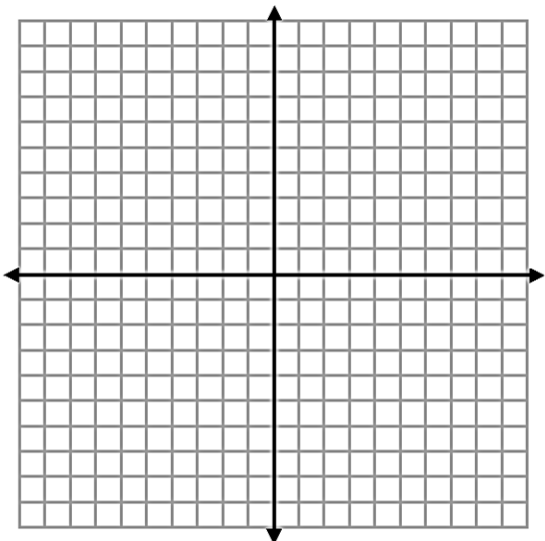


3.  $f(x) = \begin{cases} -x^2, & x \neq 2 \\ 6, & x = 2 \end{cases}$

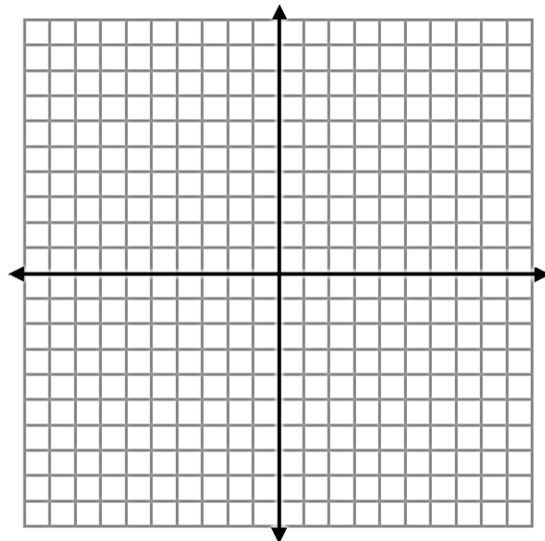
4.  $h(x) = \begin{cases} 1, & 0 < x \leq 1 \\ 3, & 1 < x \leq 2 \\ -1, & 2 < x \leq 3 \\ 0, & \text{elsewhere} \end{cases}$



$$5. g(x) = \begin{cases} \sqrt{x+1}, & x > -1 \\ 2x, & x \leq -1 \end{cases}$$

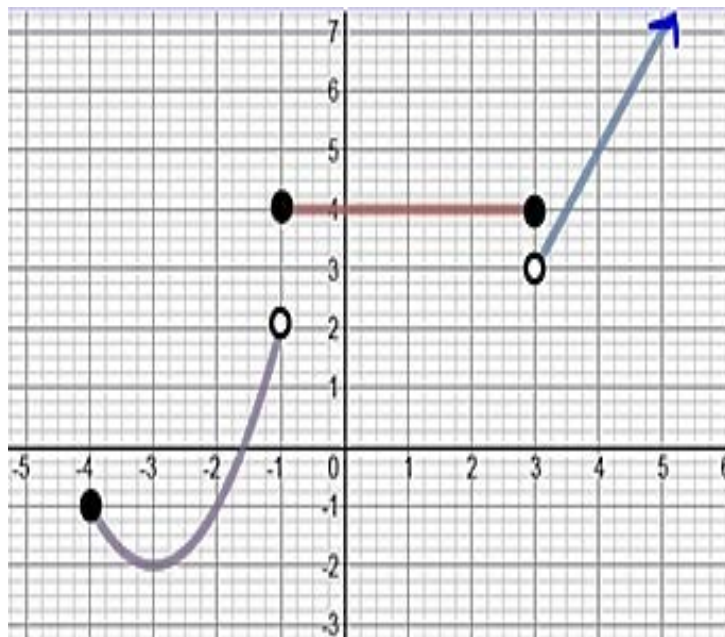


$$6. f(x) = \begin{cases} x+3, & x \neq -1 \\ 0, & x = -1 \end{cases}$$



7. Write an equation of the piece-wise equation.

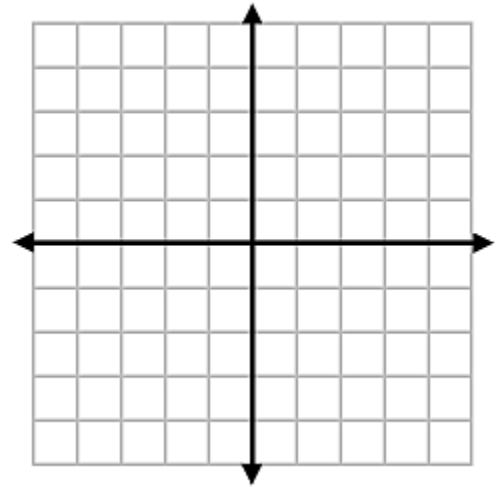
$$f(x) = \begin{cases} \underline{\hspace{2cm}}, & \underline{\hspace{2cm}} \\ \underline{\hspace{2cm}}, & \underline{\hspace{2cm}} \\ \underline{\hspace{2cm}}, & \underline{\hspace{2cm}} \end{cases}$$



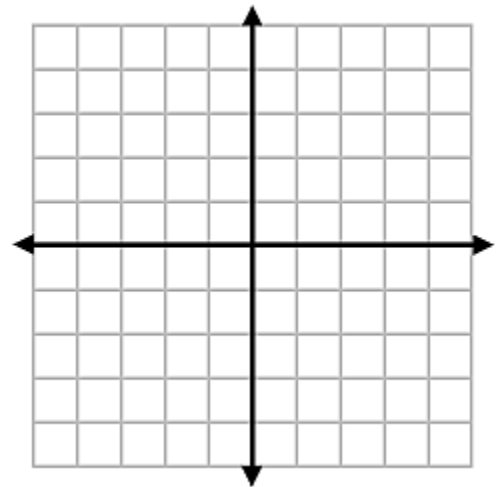
HW 2: Unit 1.2 – Graphs of Piecewise Functions

Graph the following piecewise functions.

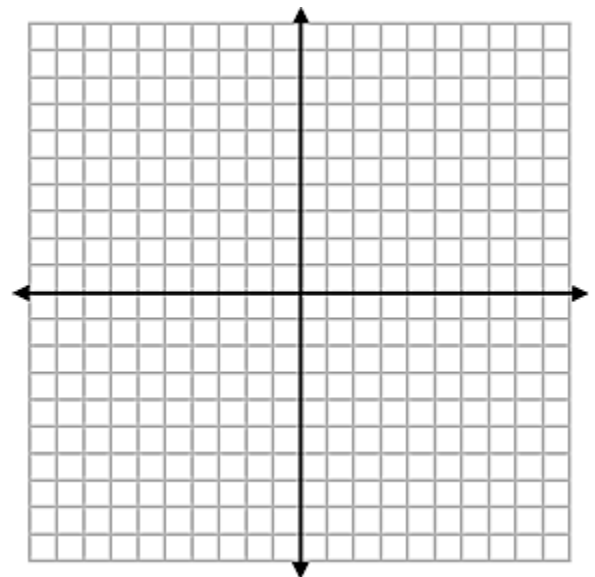
$$1. \quad f(x) = \begin{cases} x^2 - 1 & (-\infty, 2] \\ 1 & (2, 4] \\ -\frac{1}{2}x + 1 & (4, \infty) \end{cases}$$



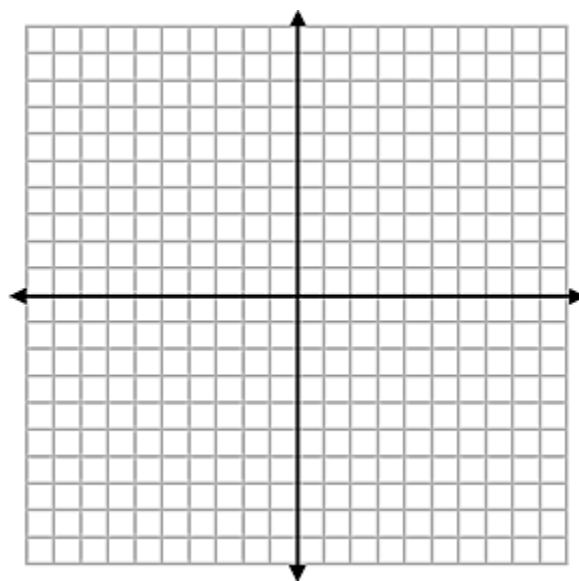
$$2. \quad f(x) = \begin{cases} 3 & (-\infty, -2) \\ -x^2 + 3 & (-2, 1] \\ 2x - 4 & (1, \infty) \end{cases}$$



$$3. \quad f(x) = \begin{cases} 2|x+2| - 1 & (-\infty, -1) \\ x^2 - 3 & [-1, 2] \\ 3 & (2, 4) \\ -x + 7 & [4, \infty) \end{cases}$$



$$4. f(x) = \begin{cases} -2x-5 & x \leq 0 \\ x^2-3 & 0 < x \leq 2 \\ \frac{1}{2}x+2 & x > 2 \end{cases}$$



$$5. f(x) = \begin{cases} (x+7)^2+3 & -9 \leq x \leq -6 \\ -\frac{1}{3}x+6 & -6 < x \leq 3 \\ 1 & 3 < x \leq 7 \end{cases}$$

