Algebra Honors

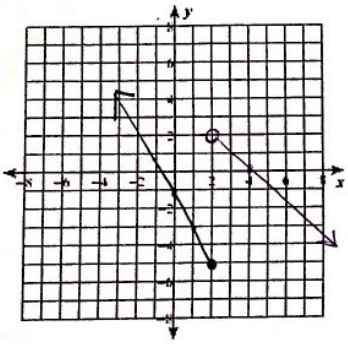
WS: 6.3 and Absolute Value Functions Extra Practice

Name Key

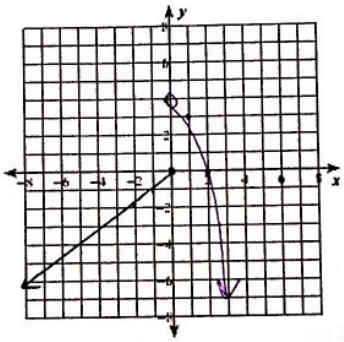
Date 3/3,3/16 Block 2A,1B

In 1 – 9, graph each function.

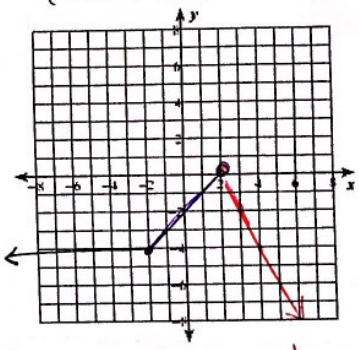
① $f(x)=\begin{cases}-2x-1, & x\le 2\\ -x+4, & x>2\end{cases}$



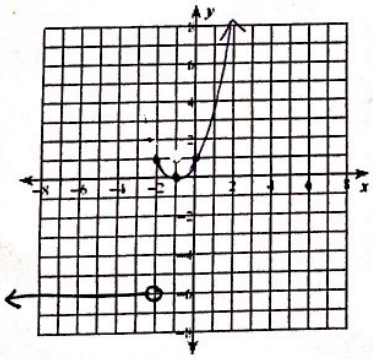
② $f(x)=\begin{cases}-|x|, & x\le 0\\ 4-x^2, & x>0\end{cases}$



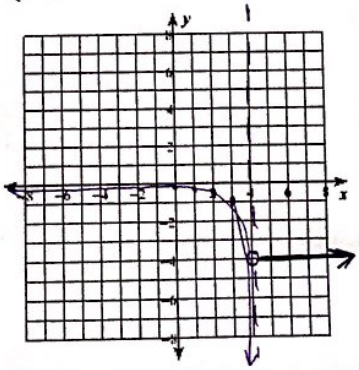
③ $f(x)=\begin{cases}-4, & x\le -2\\ x-2, & -2<x<2\\ -2x+4, & x\ge 2\end{cases}$



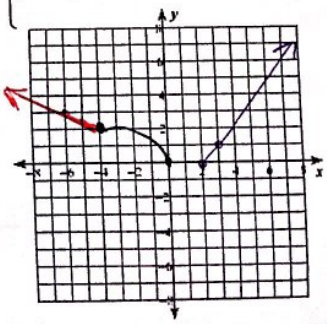
④ $f(x)=\begin{cases}-6, & x<-2\\ (x+1)^4, & x\ge -2\end{cases}$



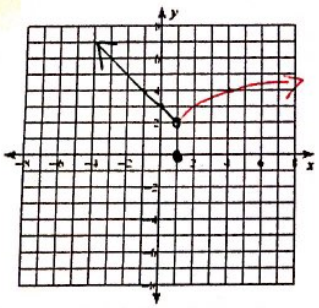
⑤ $f(x)=\begin{cases}\dfrac{1}{x-4}, & x\le 4\\ -4, & x>4\end{cases}$



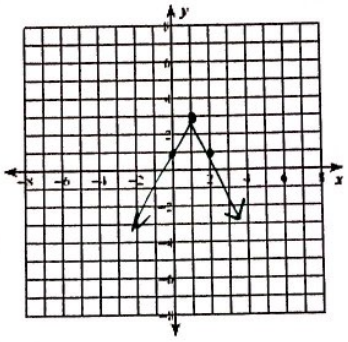
⑥ $f(x)=\begin{cases}\frac{1}{2}|x|, & x\le 4\\ \sqrt{-x}, & -4<x<2\\ |x-2|, & x\ge 2\end{cases}$ Typo!



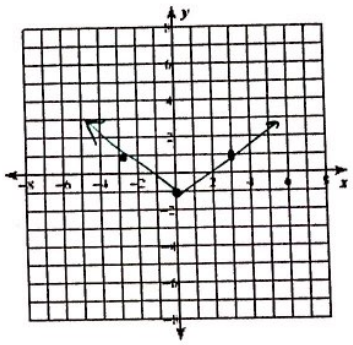
⑦ $f(x)=\begin{cases}|x-3|, & x<1\\ (x-1)^4, & x=1\\ \sqrt{4x}, & x>1\end{cases}$



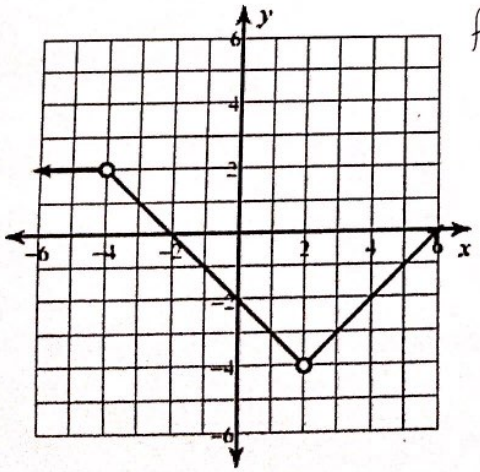
⑧ $f(x)=-2|x-1|+3$ Vertex $(1,3)$



⑨ $f(x)=\frac{2}{3}|x|-1$ Vertex: $(0,-1)$



10. Write a rule for the function shown.



$f(x)=\begin{cases}2, & x<-4\\ -x-2, & -4<x<2\\ x-6, & x>2\end{cases}$

In 11 – 12, find the domain and range of each function.

11. $f(x)=\begin{cases}-\frac{5}{2}x-2, & x\le -2\\ -x-5, & x>-2\end{cases}$

D: $(-\infty,\infty)$

R: $(-\infty,-3)\cup[3,\infty)$

12. $f(x)=\begin{cases}x^2-2x-3, & x<4\\ 3x-7, & x\ge 4\end{cases}$

D: $(-\infty,\infty)$

R: $[-4,\infty)$