1. Sketch a graph of ONE function that has ALL of the following properties.
(a) $\lim _{x \rightarrow 0^{-}} f(x)=-2$
(b) $\lim _{x \rightarrow 0^{+}} f(x)=2$
(c) $f(0)=1$
(d) $f(5)=4$
(e) $\lim _{x \rightarrow 5} f(x)=-1$
2. Sketch a graph of ONE function that has ALL of the following properties.
(a) $\lim _{x \rightarrow 0^{-}} f(x)=-\infty$
(b) $\lim _{x \rightarrow 0^{+}} f(x)=+\infty$
(c) $f(5)=4$
(d) $\lim _{x \rightarrow 5} f(x)$ does not exist.
3. Sketch a graph of ONE function that has ALL of the following properties. (12 points)
(a) $\lim _{x \rightarrow \infty} f(x)=1$
(b) $\lim _{x \rightarrow-\infty} f(x)=-1$
(c) $\lim _{x \rightarrow 2} f(x)=-1$
(d) $f(x)$ does not exist at $x=2$
