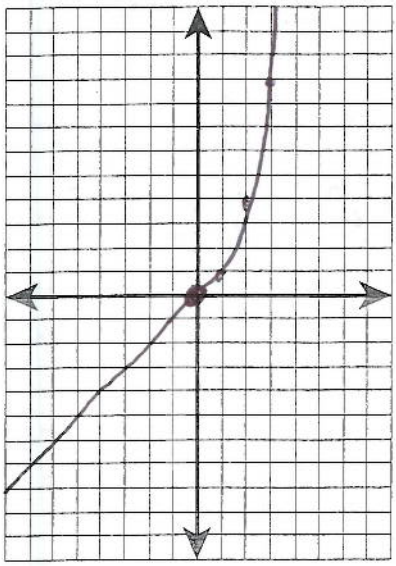
Name_____Date_____Per_____

1.3 Continued Supplement

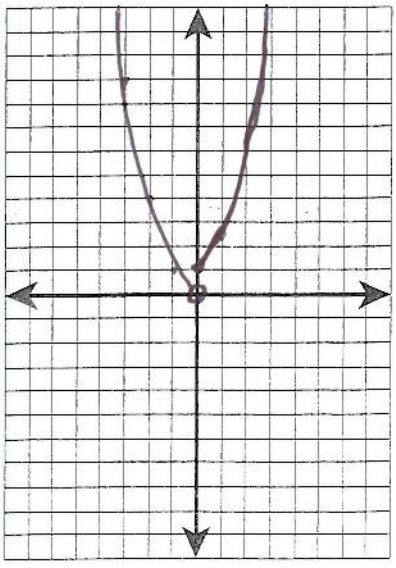
Graph each function. In each case, give any points of discontinuity. Then fill in the function property charts.

1. $f(x) = \begin{cases} x \text{ if } x < 0 \\ x^2 \text{ if } x \geq 0 \end{cases}$



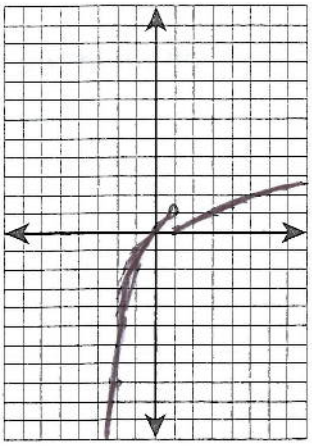
Domain	$(-\infty, \infty)$
Range	$(-\infty, \infty)$
Inc Int	$(-\infty, \infty)$
Dec Int	none
Symmetry	none
Boundedness	none
Max	none
Min	none
HA	none
VA	none
REB	$\lim_{x \to \infty} y = \infty$
LEB	$\lim_{x \to -\infty} y = -\infty$

2. $f(x) = \begin{cases} x^2 \text{ if } x < 0 \\ e^x \text{ if } x \geq 0 \end{cases}$



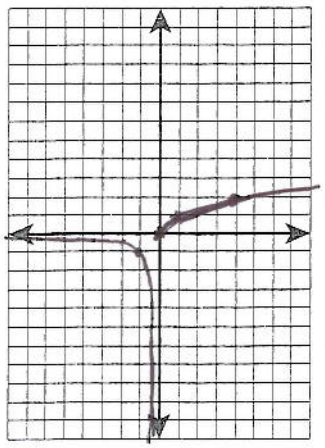
Domain	$(-\infty, \infty)$
Range	$(0, \infty)$
Inc Int	$(0, \infty)$
Dec Int	$(-\infty, 0)$
Symmetry	none
Boundedness	Below
Max	none
Min	local $y = 1$
HA	none
VA	none
REB	$\lim_{x \to \infty} y = \infty$
LEB	$\lim_{x \to -\infty} y = \infty$

3. $f(x) = \begin{cases} x^3 \text{ if } x < 1 \\ \ln x \text{ if } x \geq 1 \end{cases}$



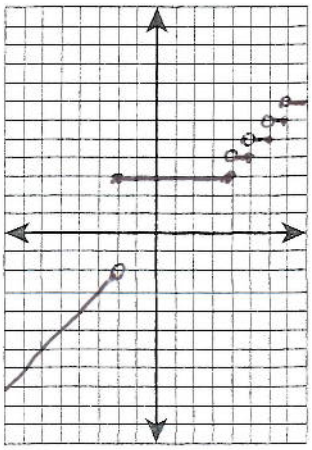
Domain	$(-\infty, \infty)$
Range	$(-\infty, \infty)$
Inc Int	$(-\infty, 1) \cup (1, \infty)$
Dec Int	none
Symmetry	none
Boundedness	none
Max	none
Min	local $y = 0$
HA	none
VA	none
REB	$\lim_{x \to \infty} y = \infty$
LEB	$\lim_{x \to -\infty} y = -\infty$

4. $f(x) = \begin{cases} \frac{1}{x} \text{ if } x < 0 \\ \sqrt{x} \text{ if } x \geq 0 \end{cases}$



Domain	$(-\infty, \infty)$
Range	$(-\infty, \infty)$
Inc Int	$(0, \infty)$
Dec Int	$(-\infty, 0)$
Symmetry	none
Boundedness	none
Max	none
Min	local $y = 0$
HA	$y = 0$
VA	$x = 0$
REB	$\lim_{x \to \infty} y = \infty$
LEB	$\lim_{x \to -\infty} y = 0$

5. $f(x) = \begin{cases} x \text{ if } x < -2 \\ 3 \text{ if } -2 \leq x \leq 4 \\ int(x) \text{ if } x > 4 \end{cases}$



Domain	$(-\infty, \infty)$
Range	$(-\infty, -2] \cap \{3, 4, 5, \ldots\}$
Inc Int	$(-\infty, -2)$
Dec Int	none
Symmetry	none
Boundedness	none
Max	local $y = 3, 4, 5 \ldots$
Min	local $y = 3, 4, 5 \ldots$
HA	none
VA	none
REB	$\lim_{x \to \infty} y = \infty$
LEB	$\lim_{x \to -\infty} y = -\infty$