



2. Let  $g(x) = 2^{1/x}$ .

2.1. What is the domain of  $g$ ?

2.2. Fill in the values of the function.

$x$	-1	-0.1	-0.01	-0.001	-0.0001	+0.0001	+0.001	+0.01	+0.1	+1
$g(x)$										

2.3. Using the information in the table what appears to be true about the one-sided limit  $\lim_{x \rightarrow 0^+} g(x)$ ?

2.4. Using the information in the table what appears to be true about the one-sided limit  $\lim_{x \rightarrow 0^-} g(x)$ ?

2.5. Using the information in the table what appears to be true about the regular limit  $\lim_{x \rightarrow 0} g(x)$ ?

3. Sketch a plot of the graph of function  $h$  on the axes below that satisfies:

- $h(-2) = 2$  and  $\lim_{x \rightarrow -2} h(x) = 1$
- $h(-1) = 3$  and  $\lim_{x \rightarrow -3} h(x) = 3$
- $h(0) = -1$ ,  $\lim_{x \rightarrow 0^+} h(x) = -2$ , and  $\lim_{x \rightarrow 0^-} h(x) = 2$
- $h(1)$  is undefined, but  $\lim_{x \rightarrow 1} h(x) = 0$
- $h(2) = 1$ , but  $\lim_{x \rightarrow 2} h(x)$  is undefined

