

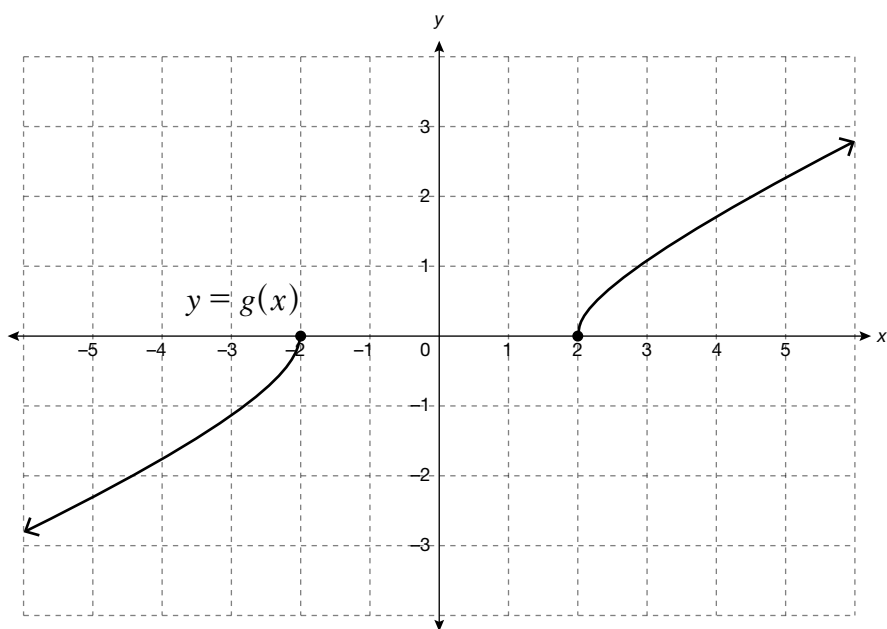


## Practice – 1

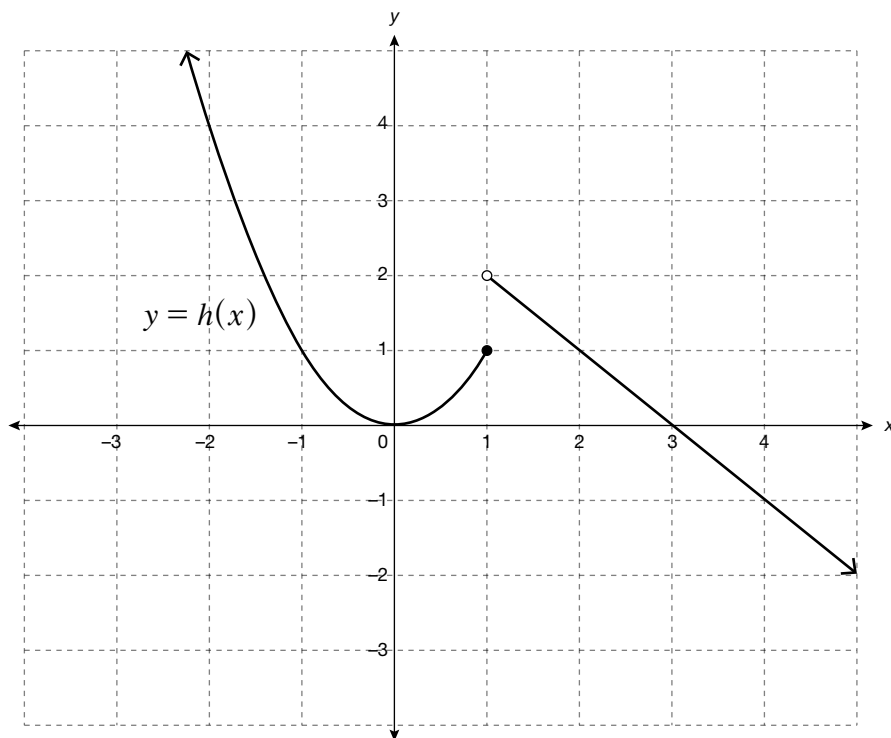
Once you feel confident with continuous and discontinuous functions, complete problems 1 to 3. Check your answers by going to the Solutions tab in Moodle.

**Instructions:** Answer each of the following practice questions on a separate piece of paper. Step by step solutions are provided under the Solutions tab. You will learn the material more thoroughly if you complete the questions before checking the answers.

1. The graph of the function  $y = g(x)$  is shown below. Determine where the function is discontinuous.



2. The graph of the function  $y = h(x)$  is shown below. Evaluate each of the following limits, if they exist.



- |                                    |                                  |
|------------------------------------|----------------------------------|
| a. $\lim_{x \rightarrow 1^-} h(x)$ | d. $h(1)$                        |
| b. $\lim_{x \rightarrow 1^+} h(x)$ | e. $h(3)$                        |
| c. $\lim_{x \rightarrow 1} h(x)$   | f. $\lim_{x \rightarrow 0} h(x)$ |
3. Where is the function  $f(x) = \frac{1}{(x-4)^2}$  discontinuous?