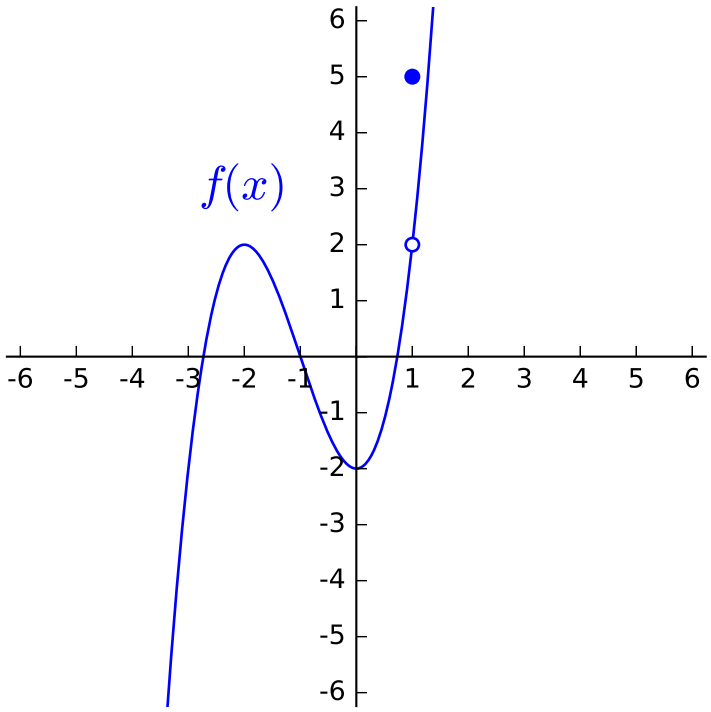
All work on this lab should be original effort from you. Although I encourage collaboration on this assignment, the work performed herein should be your own. Technology allowed on this lab includes: Desmos (`https://www.desmos.com/calculator`) and an approved TI calculator. This lab has 5 questions for a total of 0 points.

1. Below is the graph of $f(x)$.



Find the value of the following limits. If the limit does not exist, write DNE.

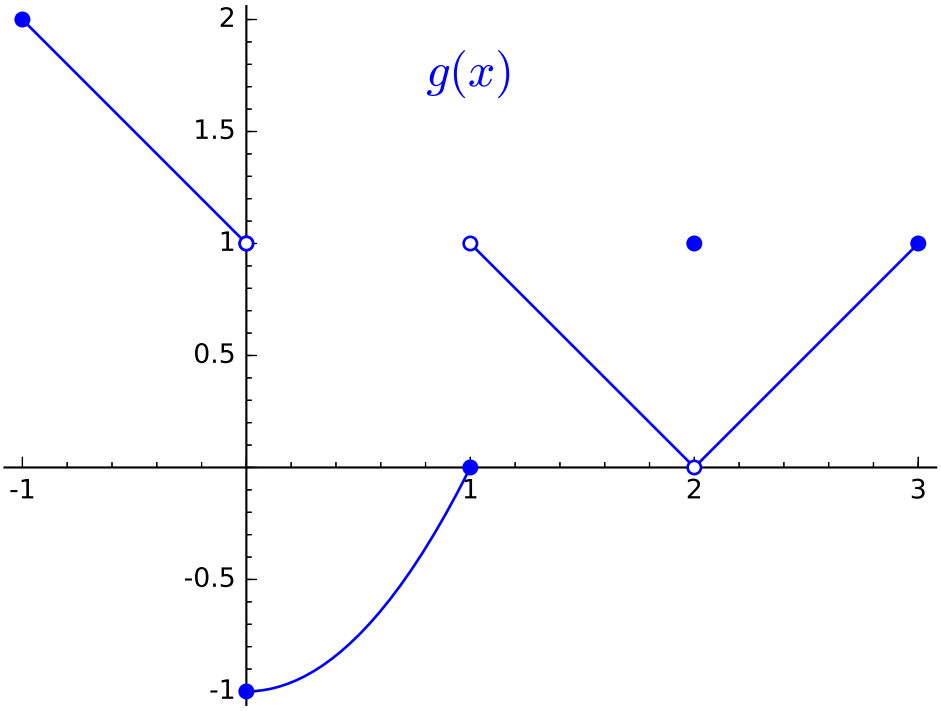
(a) $\lim_{x\to -2} f(x) =$ _____

(b) $\lim_{x\to 1^+} f(x) =$ _____

(c) $\lim_{x\to 1^-} f(x) =$ _____

(d) $\lim_{x\to 1} f(x) =$ _____

2. Below is the graph of $g(x)$.



Find the value of the following limits. If the limit does not exist, write DNE.

(a) $\lim_{x\to -1^+} f(x) =$ _____

(b) $\lim_{x\to -1^-} f(x) =$ _____

(c) $\lim_{x\to -1} f(x) =$ _____

(d) $\lim_{x\to 0^+} f(x) =$ _____

(e) $\lim_{x\to 0^-} f(x) =$ _____

(f) $\lim_{x\to 0} f(x) =$ _____

(g) $\lim_{x\to 1^+} f(x) =$ _____

(h) $\lim_{x\to 1^-} f(x) =$ _____

(i) $\lim_{x\to 1} f(x) =$ _____

(j) $\lim_{x\to 2^+} f(x) =$ _____

(k) $\lim_{x\to 2^-} f(x) =$ _____

(l) $\lim_{x\to 2} f(x) =$ _____

(m) What is the value of $f(0)$? _____

(n) What is the value of $f(1)$? _____

(o) What is the value of $f(2)$? _____

3. Write the definition of $\lim_{x \to \frac{\pi}{4}} \cos(x) = \dfrac{\sqrt{2}}{2}$ using the formal epsilon-delta form of the definition of a limit.

4. Write the solution set, in interval notation, of the following absolute value inequalities.

   (a) $0 < |x - 2| < 0.5$

   (b) $0 < |x + 5| < 0.25$

   (c) $|x^2 - 4| < 1$

5. Describe, via a graph and a mathematical expression, the punctured interval around $x = 2$ with a radius of 0.1.