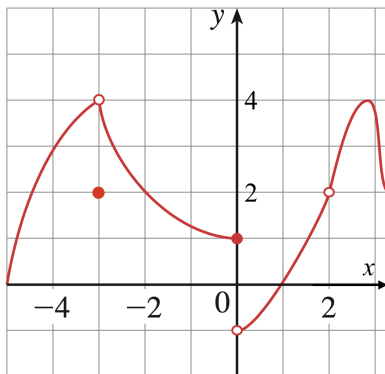# Quiz #3, 9/12
Math 156 (Calculus I), Fall 2023

Problem 1 is worth 8 points, Problem 2 is worth 2 points, for a total of 10 points. Remember to *show your work* on all problems!

1. Consider the function $f(x)$ graphed below:

For each of the following values of a, say what $\lim_{x \to a} f(x)$ is or state that it does not exist, and also say whether $f(x)$ is continuous at a.

(i) $a = -3$ (iii) $a = 1$

(ii) $a = 0$ (iv) $a = 2$

2. The position (in meters) at time t (in seconds) of a car moving along a 1-dimensional road is given by the function $f(t)$. What does the quantity $\lim_{t \to 10} \dfrac{f(t) - f(10)}{t - 10}$ represent?