

7. [8 points] On the axes provided below, sketch the graph of **one function**  $y = g(z)$  satisfying all of the following:

- The domain of  $g(z)$  is the interval  $(-10, 10)$ .
- The range of  $g(z)$  includes the number 5.
- $g(0) = -4$  and  $g(-7) = 0$
- $g(z)$  has exactly one zero.
- $g(z)$  is increasing and concave down for  $-10 < z < -5$ .
- $g(z)$  is decreasing for  $-5 < z < 0$ .
- $g(z)$  has a constant average rate of change for  $5 < z < 10$ .

Please make sure that your sketch is large, well-labeled, and unambiguous.

*Solution:* Note that there are many possible solutions.

