

7. [9 points] On the axes provided below, sketch the graph of **one possible function**  $y = g(x)$ , satisfying **all** of the following requirements. Your graph should clearly show the properties listed below to receive full credit.

- The domain of  $g$  is  $(-3, 5]$ .
- The range of  $g$  is  $[-2, 2]$ .
- $g$  has vertical intercept  $(0, 1)$ .
- $g$  has exactly two zeros, at  $x = -2$  and at  $x = 3$ .
- $g$  has a constant rate of change for  $-1 < x < 1$ .
- $g$  is increasing for  $x < 0$ .
- $g$  is concave up for  $x > 3$ .
- $g$  attains its minimum value at  $x = 5$ .

