- 7. [12 points] For each of the descriptions of a function f that follow, indicate which of the graphs below match the description. For each description there may be no, one, or several graphs that match; write **none** if no graphs match the description. You may need to use a graph more than once. In each case you should assume that f is defined only on the domain [0, 2].
 - f''(x) < 0 for x < 1 and f''(x) > 0 for x > 1; f'(x) < 0 for x < 1 and f'(x) > 0 for x > 1; and f(x) is continuous everywhere except at x = 1. \mathbf{A}

matching graph(s): _____

• f''(x) > 0 for all $x \neq 1$; f(x) < 0 for all $x \neq 1$; and f(x) is differentiable everywhere except at x = 1.

- f''(x) < 0 for all $x \neq 1$; f'(x) < 0 for x < 1 and f'(x) > 0 for x > 1; and f(x) < 0 for all $x \neq 1$. none matching graph(s): _____
- f''(x) < 0 for x < 1 and f''(x) > 0 for x > 1; f'(x) < 0 for x < 1 and f'(x) > 0 for x > 1; and f(x) is differentiable everywhere except at x = 1. A,D

