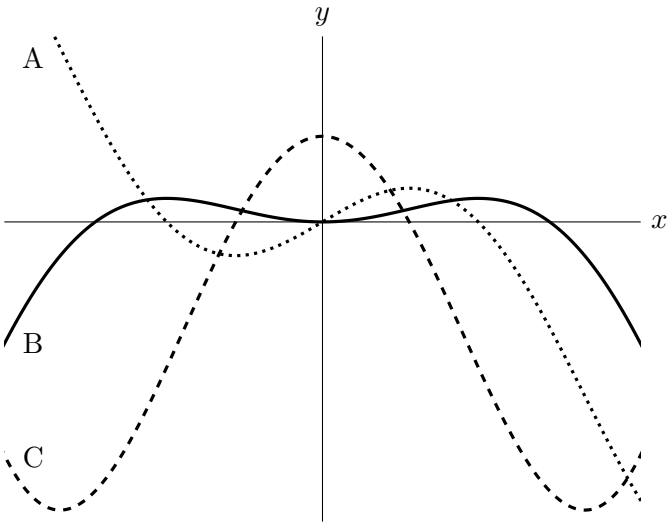
4. [4 points] Shown below are portions of the graphs of $y = f(x)$, $y = f'(x)$, and $y = f''(x)$. Determine which graph is which, and then, on the answer lines below, indicate after each function the letter A, B, or C that corresponds to its graph. No work or justification is needed.



Answer: $f(x)$: _____

$f'(x)$: _____

$f''(x)$: _____

5. [7 points] The function $p(x)$ is given by the following formula, where c and d are nonzero constants:

$$p(x) = \begin{cases} \frac{1}{3}x^3 - 9x + 1 & x \leq 0 \\ 2^x & 0 < x < 2 \\ c + d(x-2) & x \geq 2. \end{cases}$$

a. [3 points] Find one pair of values for c and d such that $p(x)$ is differentiable at $x = 2$. Show your work.

Answer: $c =$ _____ and $d =$ _____

b. [4 points] For the values of c and d from part **a.**, find the x-coordinates of all critical points of $p(x)$ or write NONE if there are none. Show your work.

Answer: Critical point(s) at $x =$ _____