10. [5 points] Shown on the axes below are the graphs of \( y = f(x), y = f'(x), \) and \( y = f''(x). \)

Determine which graph is which and circle the ONE correct response below.

- \( f(x): \) I, \( f'(x): \) II, and \( f''(x): \) III
- \( f(x): \) I, \( f'(x): \) III, and \( f''(x): \) II
- \( f(x): \) II, \( f'(x): \) I, and \( f''(x): \) III
- \( f(x): \) II, \( f'(x): \) III, and \( f''(x): \) I
- \( f(x): \) III, \( f'(x): \) I, and \( f''(x): \) II
- \( f(x): \) III, \( f'(x): \) II, and \( f''(x): \) I

11. [4 points] Suppose \( w \) and \( r \) are continuous functions on \( (-\infty, \infty), \) \( W(x) \) is an invertible antiderivative of \( w(x), \) and \( R(x) \) is an antiderivative of \( r(x). \)

Circle all of the statements I-VI below that must be true.
If none of the statements must be true, circle NONE OF THESE.

I. \( W(x) + R(x) + 2 \) is an antiderivative of \( w(x) + r(x). \)

II. \( W(x) + R(x) \) is an antiderivative of \( w(x) + r(x) + 2. \)

III. \( \cos(W(x)) \) is an antiderivative of \( \sin(w(x)). \)

IV. \( e^{W(x)} \) is an antiderivative of \( w(x)e^{w(x)}. \)

V. \( e^{R(x)} \) is an antiderivative of \( r(x)e^{R(x)}. \)

VI. If \( w \) is never zero, then \( W^{-1}(R(x)) \) is an antiderivative of \( \frac{r(x)}{w(W^{-1}(R(x)))}. \)

VII. NONE OF THESE