## Exercise 49

The figure shows the graphs of $f, f^{\prime}$, and $f^{\prime \prime}$. Identify each curve, and explain your choices.


## Solution

The $b$-curve is the derivative of the $a$-curve because the $b$-curve is zero where the $a$-curve has zero slope.


The $c$-curve is the derivative of the $b$-curve because the $c$-curve is zero where the $b$-curve has zero slope.


Therefore, the $a$-curve is $f(x)$, the $b$-curve is $f^{\prime}(x)$, and the $c$-curve is $f^{\prime \prime}(x)$.

