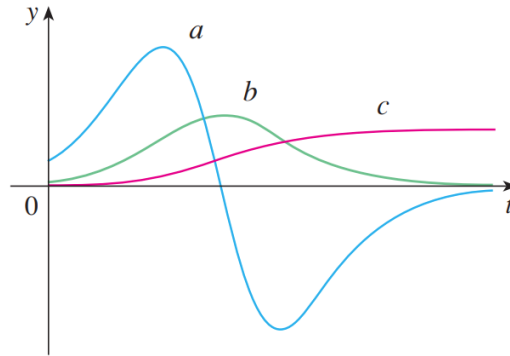


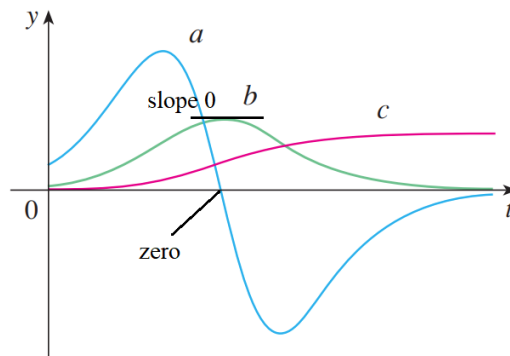
Exercise 51

The figure shows the graphs of three functions. One is the position function of a car, one is the velocity of the car, and one is its acceleration. Identify each curve, and explain your choices.



Solution

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



The b -curve is the derivative of the c -curve because the b -curve is always positive and goes to zero as $t \rightarrow \infty$. Therefore, the c -curve is the position, the b -curve is the velocity, and the a -curve is the acceleration.