1 Section 3.4

1. Identify the inner function $u = g(x)$ and the outer function $y = f(u)$ then apply the Chain Rule.

2. Identify the inner function $u = g(x)$ and the outer function $y = f(u)$ then apply the Chain Rule.

3. Identify the inner function $u = g(x)$ and the outer function $y = f(u)$ then apply the Chain Rule.

5. Identify the inner function $u = g(x)$ and the outer function $y = f(u)$ then apply the Chain Rule.

7. Use the Chain Rule.

22. Use the Chain Rule.

56. Use the Chain Rule.

77. In physics, velocity is defined as the rate of change of position.The instant velocity vector of an object that has positions $s(t)$ at time t and $s(t + \Delta t)$ at time $t + \Delta t$ can be computed as the derivative of position : $v = \lim_{\Delta t \to 0} = \frac{s(t+\Delta t)-s(t)}{\Delta t} = \frac{ds}{dt}$.