Exercise 1. If $y = x^3 + 2x$ and $dx/dt = 5$, find dy/dt when $x = 2$.

Exercise 2. A stone dropped into a pond at time $t = 0$ causes a circular ripple that travels out from the point of impact at 0.5 m/s. At what rate is the area within the ripple increasing when its radius is 10m?

Exercise 3. Air is being pumped into a spherical balloon at a rate of 500 in^3/s. How quickly is the radius of the balloon increasing when the balloon contains 500π in^3 of air?