In this activity we will practice how to approximate areas under curves using different rectangle rules and using a different number of subintervals. Consider the function

$f(x) = 2x^3 - 9x^2 + 12x - 4$ over the interval $[0, 3]$:

1) In your own words and diagrams, describe your rectangle rule.
2) For the given function, approximate the area for $N = 1, 3, 6, 12, 24$ subintervals.
3) How would you write your findings using a summation?