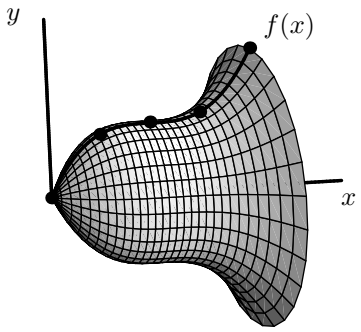
1. [11 points] Consider the shape shown to the right. The function shown as a dark curve is $f(x)$. The points on the curve are the points $(0, f(0))$, $(0.5, f(0.5))$, $(1, f(1))$, $(1.5, f(1.5))$, and $(2, f(2))$.



(a) [4 points of 11] Draw a slice, below, that you might use to find the total volume enclosed by the shape if you were to be doing this by integration. Label in your figure x, $f(x)$, Δx, and any other relevant quantities.

(b) [2 points of 11] Write an integral giving the volume of the shape.

(c) [5 points of 11] If the points shown in the figure are, in order from left to right, (0,0), (0.5,0.875), (1,1), (1.5,1.125) and (2,2), estimate the volume using the trapezoid method.