

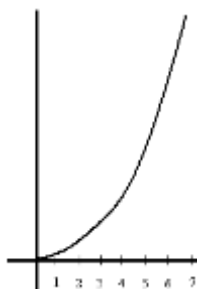
### Worksheet #28: The Area Problem

The area between a given curve and the  $x$ -axis may be approximated by drawing rectangles from the axis to the curve.

These rectangles may overestimate or underestimate the area, depending on whether they enclose more or less area than the original curve. In general, the smaller the width of the rectangles involved, the more precise the approximation.

1. Approximate the area between the curve  $f(x) = x^2$  and the  $x$ -axis between the endpoints  $x=1$  and  $x=7$  by drawing three rectangles of equal width that approximate the curve. Find the area enclosed by both a left and right-endpoint approximation method.

Left



Right

