



## IB Calculus Problem 001

Let the function  $f(x) = 6x^2 - 3x$  be as represented above.

The figure is not to scale.

- A. Find  $\int (6x^2 - 3x) dx$ .
- B. Find the area of the region bounded by the graph of  $f(x)$ , the x-axis, and the lines  $x = 1$  and  $x = 2$ .

That is,  $\int_1^2 (6x^2 - 3x) dx$ .