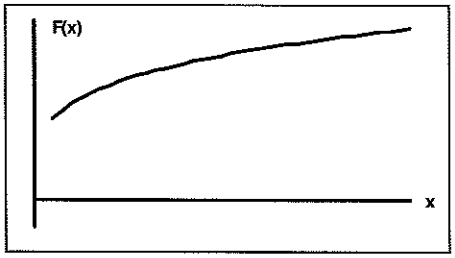
Math 124 Name _____

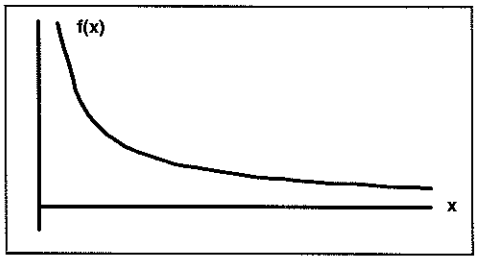
#37 REPRESENTATIONS USING THE FUNDAMENTAL THEOREM 5.3

Assume $F'(x) = f(x)$ and the Fundamental Theorem of Calculus applies in each case. For each problem complete the statement and give an illustration on each graph.

1. On the graph of $f(x)$, $f(a)$ represents _____

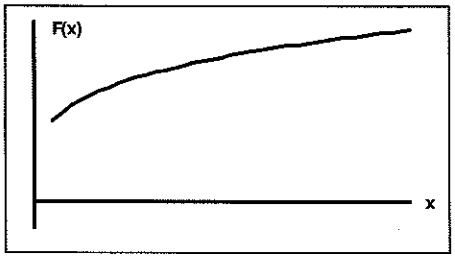
   On the graph of $F(x)$, $f(a)$ represents _____

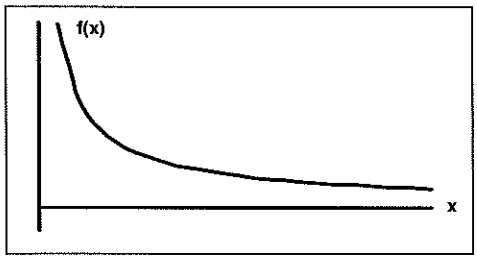




2. On the graph of $f(x)$, $\int_a^b f(x)dx$ represents _____

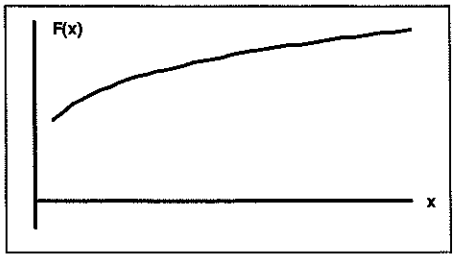
   On the graph of $F(x)$, $\int_a^b f(x)dx$ represents _____

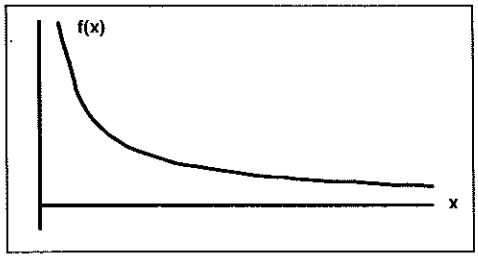




3. On the graph of $f(x)$, $\dfrac{\int_a^b f(x)dx}{b-a}$ represents _____

   On the graph of $F(x)$, $\dfrac{\int_a^b f(x)dx}{b-a}$ represents _____





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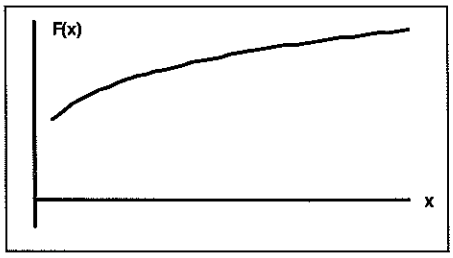
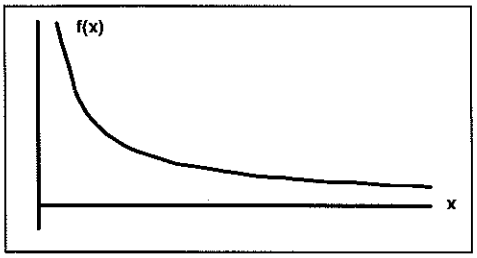
4. On the graph of $F(x)$, $F'(a)$ represents _____

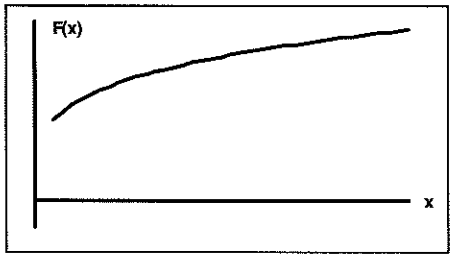
On the graph of $f(x)$, $F'(a)$ represents _____

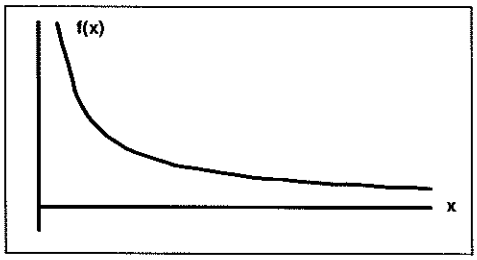




5. On the graph of $F(x), F(b)-F(a)$ represents _____

On the graph of $f(x), F(b)-F(a)$ represents _____





6. On the graph of $F(x)$, $\dfrac{F(b)-F(a)}{b-a}$ represents _____

On the graph of $f(x)$, $\dfrac{F(b)-F(a)}{b-a}$ represents _____