

Name: \_\_\_\_\_

Find  $\int_{-3}^3 \left(\frac{x}{3} + 10\right) dx$ 

- (a) Using a numerical approximation by a finite sum with at least 8 subintervals. Write out the formula in summation notation followed by the entire sum term-by-term. Show your calculations for the values of  $a$ ,  $b$ ,  $n$ , and  $\Delta x$ .

(b) Using the Fundamental Theorem of Calculus (FTC).

(c) Using elementary geometry (draw a picture alongside your calculation).

(d) Using the builtin numerical integration feature of your calculator (write the expression you enter along with the answer).