Name _____

Applying the Fundamental Theorem of Calculus

Date _____ Period _____

The Fundamental Theorem of Calculus

Let f be continuous on $[a,b]$ and F is an antiderivative of f, then

$$\int_a^b f(x)\,dx = F(b) - F(a)$$

Evaluate the following

$$\int_0^8 x^2\,dx$$

$$\int_0^{\pi} \sin x\,dx$$

Evaluate the following

$$\int_{1}^{3} 3x^2 + 2\, dx$$

Evaluate the following

$$\int_{-1}^{1} (1 - x)\, dx$$

Evaluate the following

$$\int_1^5 \frac{5}{x^2}\,dx$$

Evaluate the following

$$\int_1^4 2x + \sqrt{x}\;\,dx$$

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