

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Pd.: \_\_\_\_\_

**AB Calculus AB**

**Integration by Substitution 2**

**Evaluate the definite integral. Use your calculator to verify your result.**

1)  $\int_{-1}^1 x(x^2 + 1)^3 dx$

2)  $\int_{-2}^4 x^2(x^3 + 8)^2 dx$

3)  $\int_1^2 2x^2 \sqrt{x^3 + 1} dx$

4)  $\int_0^4 \frac{1}{\sqrt{2x+1}} dx$

$$5) \int_1^9 \frac{dx}{\sqrt{x}(1+\sqrt{x})^2}$$

$$6) \int_1^2 (x-1)\sqrt{2-x} dx$$

$$7) \int_0^{\pi/3} \cos \frac{2x}{3} dx$$

$$8) \int_{\pi/3}^{\pi/2} (x + \cos x) dx$$

$$9) \int_0^4 \frac{x^2+x-1}{\sqrt{x}} dx$$

$$10) \int_0^{\pi} \sin 2x \cos 2x dx$$