

**Substitution**

Name \_\_\_\_\_

1)  $\int_0^{1/2} \sqrt{1-2x} \, dx$

2)  $\int \sin(7-3x) \, dx$

3)  $\int x(x^2-1)^{99} \, dx$

4)  $\int \frac{x^2}{\sqrt{2+x^3}} \, dx$

$$5) \int \frac{x+3}{(x^2+6x)} dx$$

$$6) \int x^3(1-x^4)^5 dx$$

$$7) \int \sin x \cos x dx$$

$$8) \int_0^{\pi/4} \tan^3 x \sec^2 x dx$$

$$9) \int \frac{\cos \sqrt{x}}{\sqrt{x}} dx$$

$$10) \int_{\sqrt[3]{\pi/2}}^{\sqrt[3]{\pi}} t^2 \cos(\pi - t^3) dt$$

$$11) \int_0^1 (x^4 + x)^5 (4x^3 + 1) dx$$

$$12) \int_1^4 \frac{1}{x^2} \sqrt{1 + \frac{1}{x}} dx$$

$$13) \int_0^1 \frac{e^x}{e^x + 1} dx$$

$$14) \int_1^2 x\sqrt{x-1} dx$$