

Name \_\_\_\_\_

Section \_\_\_\_\_

T.A. \_\_\_\_\_

SCORE \_\_\_\_\_ /50

### Integration Assignment

#### Homework #8

**7.6 ) 1, 2, 4, 6, 14, 16, 20, 40**

and the following problems:

1.  $\int \sec^3 x dx$

2.  $\int \frac{x^2}{\sqrt{1-x^6}} dx$

3.  $\int (\cosh x - \sinh x) dx$

4.  $\int \frac{x^3}{x^3+1} dx$

5.  $\int \frac{\tan^{-1} x}{1+x^2} dx$

6.  $\int 2^x dx$

7.  $\int \frac{x^3}{\sqrt{4+x^2}} dx$

8.  $\int (2x+3)e^x dx$

9.  $\int \sqrt{\frac{1-x}{1+x}} dx$

10.  $\int \frac{e^{1/x}}{x^2} dx$

11. Find the area of the ellipse  $\frac{x^2}{4} + \frac{y^2}{9} = 1$

12.  $\int (x\sqrt{1-x^4}) dx$

$$13. \int \frac{1+e^x}{e^x} dx$$

$$14. \int \frac{x^4}{x^2-4} dx$$

$$15. \int (\tan^6 x \sec^4 x) dx$$