	Quiz #1 Math 102	012	
Name:	I.D.	Sec.	

**48/7.3** Evaluate  $\int \cot x dx$ 

 $\int \frac{\cos x}{\sin x} dx \quad u = \sin x \quad du = \cos x dx$ 

$$= \int \frac{1}{u} du = \ln |u| + c = \ln |\sin x| + C$$

**44/7.2** Find an equation of the curve that satisfies each point (x, y) on the curve the slope equals the square of the distance between the point and the y-axis the point (-1,2) is on the curve.

$$y' = x^2 \implies y = \frac{x^3}{3} + C$$
 at (-1,2)  $C = \frac{7}{3}$ 

Quiz #2a Math 102 012  
Name: I.D. Sec.  
30/7.4 Let 
$$S = \sum_{k=0}^{n} ar^{k}$$
. Show that  $S - rS = a - ar^{n+1}$ .  
 $S = ar^{0} + ar^{1} + - + ar^{n+1}$ .  
 $-rS = -ar^{n} + ar^{n} + ar^{n+1}$ .  
 $S - rS = a - ar^{n+1}$ .

2. Find the maximum and minimum bounds of the intgral  $\int_{0}^{3} x^{3} + 2 dx$ 

$$\max f(n) = x^{3} + 2$$
  
is 29 al  $n = 3$   
min is 2 al  $n = 0$   
(3)(2)  $\leq \int_{0}^{3} x^{3} + 2 dx \leq (3)(2n)$ 

