

MA 131 - Extra Credit Assignment

1.  $\int \sqrt{x+1} \, dx$

2.  $\int \left( \frac{5}{x} - \frac{x}{5} \right) dx$

3.  $2 \int_0^1 \left( \frac{2}{x+1} - \frac{1}{x+4} \right) dx$

4.  $\int_{-2}^2 \frac{3}{2e^{3x}} dx$

5.  $\int_{-1}^1 \frac{1-x-e^{-x}}{2} dx$

6. Area under  $e^{x/2}$  from  $x=0$  to  $x=1$

7. Find the area bounded by  $y=\sqrt{x}$  and  $y=x^2$ .

8. Find the area bounded by  $y=x^3$  and  $y=2x^3-x^2-6x$   
(Hint: There are two regions)

9. Area between  $y=e^x$  and  $y=e^{-x}$  for  $x=0$  to  $x=\ln(2)$

10. Find the area of the region between the curves  
 $y=2x^2+x$  and  $y=x^2+2$  from  $x=0$  to  $x=2$