

## Math 1496 Calc 1 - Homework #11

Pg. 362-3, #7, 9, 13, 17, 37, 51, 53 and 69,

Pg. 370, #3, 5, 9, 11, 17, 35, and 39.

Pg. 450, #15, 17, 23, and 25

Pg. 362-3

Find the indicated integral

$$\#7 \int \frac{1}{2x+5} dx$$

$$\#9 \int \frac{x}{x^2-3} dx$$

$$\#13 \int \frac{x^2-7}{x} dx$$

$$\#17 \int \frac{x^2-3x+2}{x+1} dx$$

$$\#37 \int \frac{\cos t}{1+\sin t} dt$$

$$\#51 \int_0^4 \frac{5}{3x+1} dx$$

$$\#53 \int_1^e \frac{(1+\ln x)^2}{x} dx$$

#69 Find area bound by  $y = \frac{x^2+4}{x}$ ,  $x = 1$ ,  $x = 4$  and  $y = 0$ .

Pg. 370

Find the indicated integral

$$\#3 \int \frac{dx}{\sqrt{9-x^2}}$$

$$\#5 \int \frac{dx}{x\sqrt{4x^2-1}}$$

$$\#9 \int \frac{t}{\sqrt{1-t^4}} dt$$

$$\#11 \int \frac{t}{t^4+25} dx$$

$$\#17 \int \frac{1}{\sqrt{x}(1-\sqrt{x})} dx$$

$$\#35 \int_0^2 \frac{dx}{x^2-2x+2}$$

$$\#39 \int \frac{1}{\sqrt{-4x-x^2}} dx$$

Pg. 450

Sketch the region and find the area of the given region

#15.  $y = x^2 - 1$ ,  $y = -x + 2$ ,  $x = 0$ ,  $x = 1$

#17.  $f(x) = x^2 + 2x$ ,  $g(x) = x + 2$

#23.  $f(y) = y^2$ ,  $g(y) = y + 2$

#25.  $f(y) = y^2 + 1$ ,  $g(y) = 0$ ,  $y = -1$ ,  $y = 2$