MATLAB SHEET # 1

Evaluation of integrals can be performed by typing MATLAB command

syms x; int(f(x))

then pressing enter.

Here f(x) is to be inserted in MATLAB format. For example

$$\int \frac{dx}{x(x+1)}$$

will be entered as

syms x; int(1/(x*(x+1))).

$$\int \frac{dx}{x^2(x-2)}$$

will be entered as

syms x; int(1/(x^2*(x-2)))

Practice Problems

Integrate using above MATLAB command.

1) $x\sqrt{x^2-4}$

2) $f(x) = x + \csc x + \sec x$

3) $f(x) = \dfrac{1}{x(x+1)(x^2+4)}$

4) $f(x) = \ln(x^2+1)$ *(Note: ln function will be entered as log in MATLAB).*

5) Problems 6, 7, 9, 10 of Problems (1.2). Also verify you integration after separating variables in HW problem of (1.4)