SOME COMMONLY USED *MATHEMATICA* COMMANDS

Command	Purpose
`D[f[x], x]` or `f'[x]`	Gives $f'(x)$
`ContourPlot[f[x, y], {x, a, b}, {y, c, d}]`	Draws a contour map of $f(x, y)$ over $a \leq x \leq b$, $c \leq y \leq d$
`Expand[expression]`	Expands the given algebraic expression
`Factor[expression]`	Factors the given algebraic expression
`FindRoot[f[x], {x, x0}]`	Gives a zero of $f(x)$ near $x = x_0$
`ImplicitPlot[eqn, {x, a, b}, {y, c, d}]`	Graphs the curve defined implicitly by *eqn* over $a \leq x \leq b$, $c \leq y \leq d$
`Integrate[f[x], x]`	Gives the indefinite integral $\int f(x)dx$
`Integrate[f[x], {x, a, b}]`	Gives the definite integral $\int_a^b f(x)dx$ symbolically
`Limit[f[x], x -> x0]`	Gives $\lim\limits_{x \to x_0} f(x)$
`N[expression]`	Gives the numerical value of an expression
`NIntegrate[f[x], {x, a, b}]`	Gives the definite integral $\int_a^b f(x)dx$ numerically
`NSolve[eqn, x]`	Solves the given polynomial equation numerically
`ParametricPlot[{f[t], g[t]}, {t, a, b}]`	Draws the graph of the parametric curve $x = f(t)$, $y = g(t)$ over $a \leq t \leq b$
`Plot[f[x], {x, a, b}]`	Draws the graph of $f(x)$ over $a \leq x \leq b$
`Plot3D[f[x, y], {x, a, b}, {y, c, d}]`	Draws the graph of $f(x, y)$ over $a \leq x \leq b$, $c \leq y \leq d$
`Series[f[x], {x, a, n}]`	Gives Taylor series of $f(x)$ about $x = a$