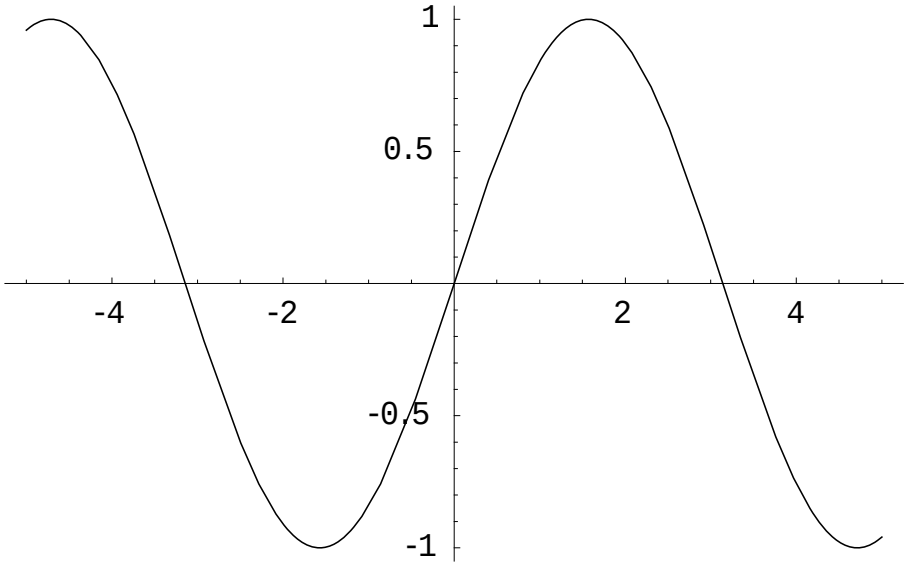
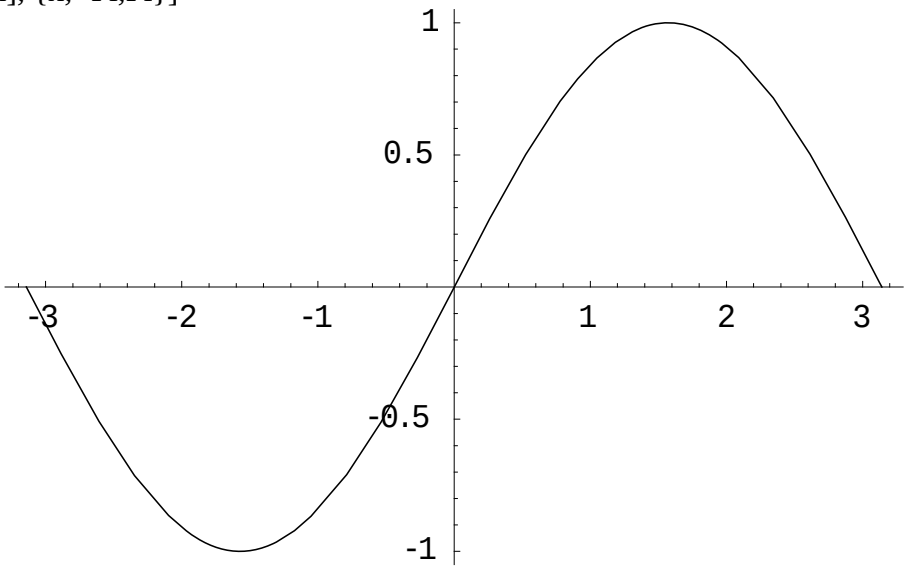
(* Mathematica: plot a function and series expansions *)
(* Use format→style → input. Use Help→ Help Browser and access function etc needed *)

Plot[Sin[x], {x,-5,5}] (* use shift then enter to execute a Mathematica command *)



- Graphics -

Plot [Sin[x], {x, -Pi,Pi}]



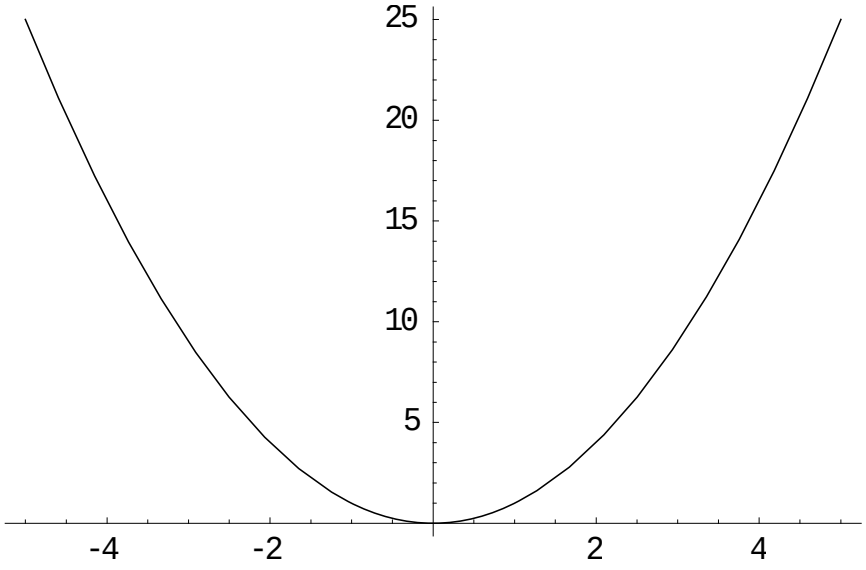
- Graphics -

Series[Sin[x],{x,0,5}] (* series expansion of sin(x) about x=0 and order 5 *)
$x-x^3/6+x^5/120+O[x]^6$

Series[E^x,{x,0,3}] (*series expansion of e^x about x=0 and order 3 *)
$1+x+x^2/2+x^3/6+O[x]^4$

Series [Log[x],{x,1,3}] (* series expansion of ln(x) about x=1 and order 3 *)
$(x-1)-1/2\ (x-1)^2+1/3\ (x-1)^3+O[x-1]^4$

Plot [x^2, {x, -5,5}]



- Graphics -

Integrate[x^2,x]
$x^3/3$

Integrate[x^2,x]+C
$C+x^3/3$

D[x^2,x]
2 x