**Homework: Equations of the tangent and normal lines to a point on a curve**



1. Given that *f*(*x*) = *x*² + 5*x*  + 4 . Graph the function.

a) Find *f* (-4)

b) Find 

c) What is the slope of a line tangent to *f* when *x* = -4

d) What is the equation of the line tangent to *f* when *x* = -4?

e) What is the equation of the line perpendicular to *f* when *x* = -4?

2. a) Sketch the following function:



b) Find *f* (1)

c) Find 

d) Find  when *x* = 1

e) What is the equation of the line tangent to *f* when *x* = 1?

f) What is the equation of the line perpendicular to *f* when *x* = 1?