```
>> disp('Divdiff')
Divdiff
>> exp(1)
ans =
   2.718281828459046
>> eps=1e-4
eps =
     1.000000000000000e-04
>> (exp(1+eps)-exp(1))/eps
ans =
   2.718417747078483
>> ans-exp(1)
ans =
     1.359186194376250e-04
>> eps=1e-8
eps =
     1.000000000000000e-08
>> (exp(1+eps)-exp(1))/eps
ans =
   2.718281777447373
>> ans-exp(1)
ans =
    -5.101167221965852e-08
>> eps=1e-12
eps =
     1.000000000000000e-12
>> (exp(1+eps)-exp(1))/eps
ans =
   2.718270053492233
>> ans-exp(1)
ans =
    -1.177496681226131e-05
>> disp('Automatic Differentiation')
Automatic Differentiation
>> ls
fenton.m        fenton_wrap.m

>> edit fenton.m
>> edit fenton_wrap.m
>> eps=1e-8
eps =
     1.000000000000000e-08
>> (fenton([1+eps 1])-fenton([1 1]))/eps
ans =
 -40.399998724183206
>> [f,g,h]=fenton_wrap([1 1],2)
```

```
f =
  11.600000000000000
g =
 -40.399999999999999
 -40.000000000000000
h =
   1.0e+02 *
   2.020000000000000   1.600000000000000
   1.600000000000000   2.008000000000000
```