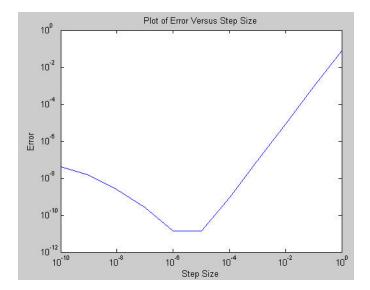
Solution 4.22

Using the same function as in Example 4.8:

```
>> ff=@(x) cos(x);
>> df=@(x) -sin(x);
>> diffex(ff,df,pi/6,11)
   step size
               finite difference
                                    true error
 1.000000000 -0.42073549240395
                                  0.0792645075961
 0.1000000000 - 0.49916708323414
                                  0.0008329167659
 0.010000000 -0.49999166670833
                                  0.0000083332917
 0.0010000000 -0.49999991666672
                                  0.0000000833333
 0.0001000000 - 0.49999999916672
                                  0.0000000008333
 0.0000100000 -0.49999999998662
                                  0.000000000134
 0.0000010000 -0.5000000001438
                                  0.000000000144
 0.000001000 - 0.49999999973682
                                  0.000000002632
 0.000000100 - 0.50000000251238
                                  0.000000025124
 0.000000010 - 0.49999998585903
                                  0.000000141410
 0.0000000001 - 0.50000004137019
                                  0.0000000413702
```



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