

## 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
1.0000000000	-0.42073549240395	0.0792645075961
0.1000000000	-0.49916708323414	0.0008329167659
0.0100000000	-0.49999166670833	0.0000083332917
0.0010000000	-0.49999991666672	0.0000000833333
0.0001000000	-0.49999999916672	0.0000000008333
0.0000100000	-0.49999999998662	0.0000000000134
0.0000010000	-0.50000000001438	0.0000000000144
0.0000001000	-0.49999999973682	0.0000000002632
0.0000000100	-0.50000000251238	0.0000000025124
0.0000000010	-0.49999998585903	0.0000000141410
0.0000000001	-0.50000004137019	0.0000000413702

