Solution 23.14

(a) Create the M-file function:

```
function y=fn(x)

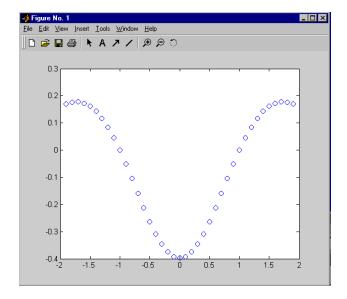
y=1/sqrt(2*pi)*exp(-(x.^2)/2);
```

Then implement the following MATLAB session:

Thus, about 68.3% of the area under the curve falls between -1 and 1 and about 95.45% falls between -2 and 2.

(b)

```
>> x=-2:.1:2;
>> y=fn(x);
>> d=diff(y)./diff(x);
>> x=-1.95:.1:1.95;
>> d2=diff(d)./diff(x);
>> x=-1.9:.1:1.9;
>> plot(x,d2,'o')
```



Thus, inflection points $(d^2y/dx^2 = 0)$ occur at -1 and 1.

Copyright © McGraw-Hill Education. This is proprietary material solely for authorized instructor use. Not authorized for sale or distribution in any manner. This document may not be copied, scanned, duplicated, forwarded, distributed, or posted on a website, in whole or part.