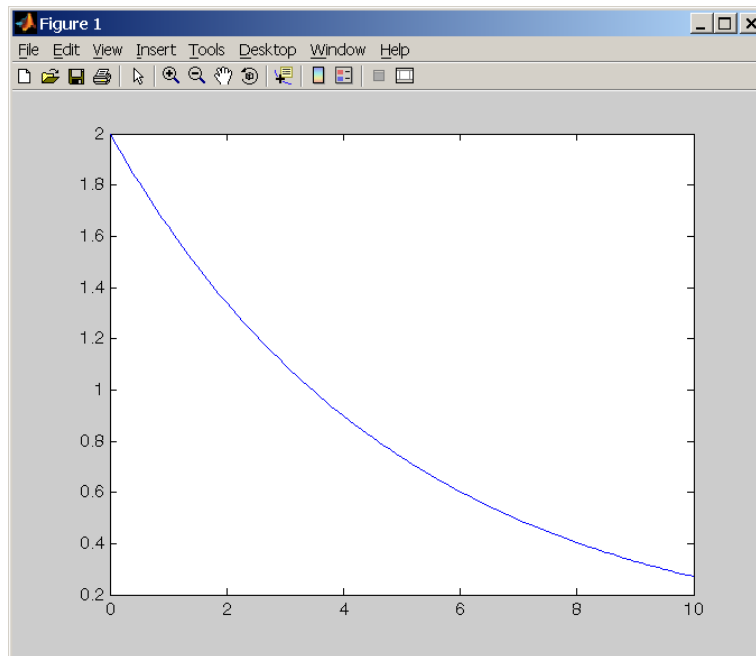


1. Introduction to MATLAB

1.1 When these statements are executed, the results are as shown below:



Exercises 1.2 through 1.3 are procedural exercises, and do not appear in this ISM.

1.4 A MATLAB Command Window session that evaluates the specified expressions is shown below. In this and all future exercises, user inputs are shown in bold face.

```
>> u=1;
>> v=3;
>> (4*u)/(3*v)
ans =
    0.4444
>> (2*v^2)/(u+v)^2
ans =
    0.0139
>> v^3/(v^3-u^3)
ans =
    1.0385
>> (4/3)*pi*v^2
ans =
   37.6991
```

1.5 A MATLAB Command Window session that evaluates the specified expressions is shown below. Note that it is just as easy to calculate expressions with real and complex results.

```
>> x = 2
```

```

x =
    2
>> y = -1
y =
   -1
>> (2*x^3)^(1/4)
ans =
    2
>> (2*y^3)^(1/4)
ans =
 0.8409 + 0.8409i

```

- 1.6** Exercise 1.6 is a procedural exercise, and does not appear in this ISM. The required command is `pwd`. The directory in which MATLAB starts will vary from installation to installation and among MATLAB versions.

- 1.7** The required command to determine the current directory is `pwd`. The default directory when my installation of MATLAB starts is.

```

>> pwd
ans =
C:\Users\schapman\Documents\MATLAB

```

The current directory on startup will be different on your computer.

- 1.8** The required command to create a new directory is `mkdir`. The command to add the directory to the path is `addpath`. The directory can be created and added to the path with the statements.

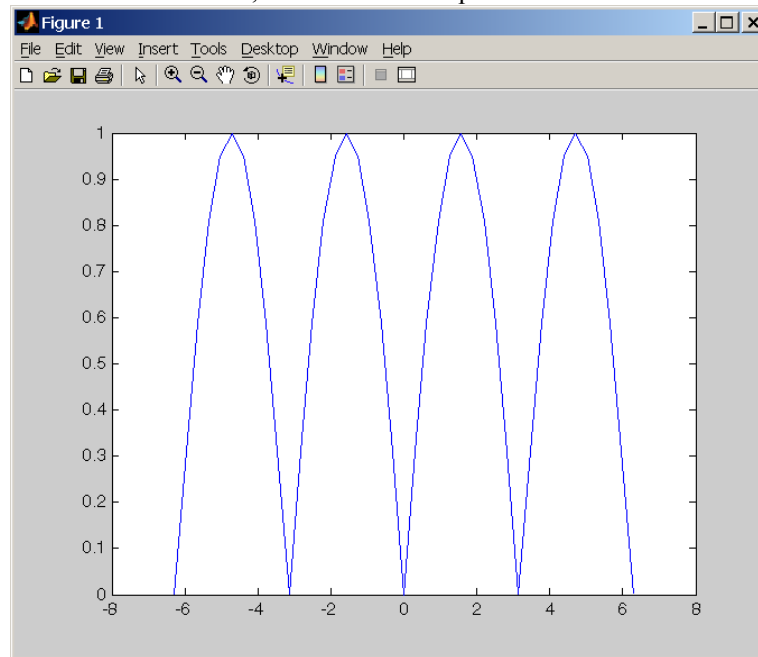
```

mkdir('mynewdir');
addpath('mynewdir');

```

Alternately, both jobs can be performed using the Path Tool (`pathtool`).

1.9 When file `test2.m` is executed, the results are the plot shown below:



1.10 When `test2` is typed into the Command Window, file `test2.m` is executed, even though it is not in the current directory, because it is in the MATLAB search path. The results are identical to before.