Instructor Solution

Contents

TEST, Exercise 1

```
if ~exist('____code____','var') ; clear ; end
format compact
more off
```

EXERCISE DESCRIPTION:

Perform some simple computations.

Hints

- Note that lines in your script that start with a percent, like this one, are ignored by Matlab. These "comment" lines do not really "do" anything. But they do allow you to explain your code to the grader.

- Note also that a line starting with a *double* percent followed by a title, like the "%% Hints" line above, starts a new section in the resulting pdf file. Use such lines to create separate sections with titles "a)" and "b)" for the subexercises.

- If there is *only* the double percent, then no new section is started, but in the pdf file, your code is executed at that point and the results shown. Use this in exercise (b): in particular, put a double percent line after you have found the sine of 30 degrees using the `sind` function, to show that result before you evaluate it again using the `sin` function.

- Single-percent comment lines that *immediately* follow a double-percent line, with no blank lines or code in between, allow you to use "mark-up". Mark-up allows you to insert such things as *italics* (enclose the italic text between underscores), **bold text** (between stars), `typewriter font` (between vertical bars), and inline math like H_2O and $|x| = \sqrt{x^2}$ (between dollar signs). See the script file. You can also insert other files, using "include tags"; see the script file of exercise 3 for an example.

Mark up also allows you to insert "displaymath" like

$$T_{\text{exact}} = 14.6e^{-1.1t} \qquad q = \int_{t=0}^{2} T \, \mathrm{d}t$$

in non-indented paragraphs like this one (between double dollar signs). See the script file of this exercise for an example. Note: Math looks horrible in Matlab. In Matlab you are usually better off showing the math in code form, using typewriter font.
WARNING: Mark-up text is extremely picky. A missing or additional space behind the leading percent and it is all wrong. And there may not be any completely blank lines between the mark up text and its preceding double-percent line either.

SOLUTION:

a)

```
% the parentheses below are really needed
(2+3)/4
```

```
ans =   1.2500
```

b)

```
% one way to get the sine of 30 degrees
sind(30)
```

```
ans =   0.50000
```

```
% the other way
sin(30/180*pi)
```

```
ans =   0.50000
```