

In Section 8.4, read to the end of Example 6 (but skip Example 4).

Do these problems:

p. 553 # 29

p. 563 # 14

p. 569 # 2, 7, 9, 14, 25, 29

Then do the following problems, which are a warmup for Chapter 11. DO NOT turn in a printout of your matlab session, just give the answers (to 14 decimal places).

To find matlab on ITaP Windows machines, from the Start menu, go to All Programs, Standard Software, Computational Packages.

A) Use the matlab commands

```
> format long
> s=0
> for n=1:10
s=s+1/4^n;
end
> s
```

to find the sum of the first 10 terms of the series

$$\frac{1}{4^1} + \frac{1}{4^2} + \frac{1}{4^3} + \frac{1}{4^4} + \cdots$$

Then do the same commands but replace

```
> for n=1:10
```

by

```
> for n=1:20
```

to find the sum of the first 20 terms.

B) Now proceed as in Problem A to find the sums of the first 10 and 20 terms of the series

$$\frac{1}{5^1} + \frac{1}{5^2} + \frac{1}{5^3} + \frac{1}{5^4} + \cdots$$