

In Section 8.8, read from the beginning of the section to the end of Example 3.

Do these problems:

p. 570 # 30

p. 575 # 12, 22, 26

p. 615 # 11, 12, 13, 17

Then do the following problems (you may turn in printouts for these):

A) Use the matlab commands

```
> format long
> s(1:5)=0
> for i=1:5
for n=1:10^i
s(i)=s(i)+1/n^2;
end
end
> s
```

to find the sum of the first 10, 100, 1000, 10000, and 100000 terms of the series

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

B) Use the matlab commands

```
> format long
> s(1:5)=0
> for i=1:5
for n=1:10^i
s(i)=s(i)+1/n;
end
end
> s
```

to find the sum of the first 10, 100, 1000, 10000, and 100000 terms of the series

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

C) How were your results for Problem B different from your results for Problem A?