

Matlab notes for math 160 Homework 6

I will sum the Taylor polynomial for e^2 using first 100 terms and then 1000 terms and then compare with the actual value.

```
n=0:100;  
S=sum(2.^n./factorial(n))
```

```
S = 7.3891
```

```
abs(S-exp(2))
```

```
ans = 1.7764e-15
```

The error is very small, less than 10^{-14} .

B)

```
n=0:1000;  
S=sum(2.^n./factorial(n))
```

```
S = 7.3891
```

```
abs(S-exp(2))
```

```
ans = 1.7764e-15
```

The error is about the same.