

```
>> %Exercise 1.1
```

```
>> %a
```

```
>> 1/0
```

```
ans =
```

```
Inf
```

```
>> %A positive number divided by zero is always infinity.
```

```
>> %b
```

```
>> 0/0
```

```
ans =
```

```
NaN
```

```
>> %Zero divided by zero is indeterminate
```

```
>> %c
```

```
>> 0/1
```

```
ans =
```

```
0
```

```
>> %Zero divided by a finite number is always zero.
```

```
>> %d
```

```
>> (2 + 10^(-160)) / 2
```

```
ans =
```

```
1
```

```
>> %The distance from one is less than machine epsilon
```

```
>> %Exercise 1.6
```

```
>> %a
```

```
>> 100(1 + 0.01/(365 * 24))^(365*24)
```

```
100(1 + 0.01/(365 * 24))^(365*24)
```

```
↑
```

```
Error: Invalid expression. When calling a function or indexing a variable, use  
parentheses. Otherwise, check for mismatched delimiters.
```

```
>> 100*(1 + 0.01/(365 * 24))^(365*24)
```

```
ans =
```

```
101.0050
```

```
>> %b
```

```
>> 100*(1 + 0.01/(365 * 24*60*60))^(365*24*60*60)
```

```
ans =
```

101.0050

>> %c

>> 100\*(1 + 0.01/(365 \* 24\*60\*60\*1000))^(365\*24\*60\*60\*1000)

ans =

101.0050

>> %d

>> 100\*(1 + 0.01/(365 \* 24\*60\*60\*1000\*1000))^(365\*24\*60\*60\*1000\*1000)

ans =

100.7027

>> %e

>> 100\*(1 + 0.01/(365 \* 24\*60\*60\*1000\*1000\*1000))^(365\*24\*60\*60\*1000\*1000\*1000)

ans =

100

>> %f

>> %The problem occurs because  $r/n$  becomes too close to machine epsilon. Therefore, for a given  $r$  we would expect an error when  $n > r * 2 * 10^{16}$ .

>>