Code Examples

Taqi

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Chapter 2

Section 1

```
set.seed(23)
P <- RM_norm(N = 5, mean = 0, sd = 1)
spectrum_P <- spectrum(P)
# Outputs the following
spectrum_P
```

```
##        Re      Im   Norm Order
## 1 -0.5434  1.3539 1.4589     1
## 2 -0.5434 -1.3539 1.4589     2
## 3  0.2255  1.4250 1.4427     3
## 4  0.2255 -1.4250 1.4427     4
## 5 -0.8678  0.0000 0.8678     5
```

```
\begin{lstlisting}[language=R]
library(RMAT)
P <- RM_norm(N = 5, mean = 0, sd = 1)
spectrum_P <- spectrum(P)
# Outputs the following
spectrum_P
...
\end{lstlisting}
```

Spectrum Dataframe			
Re	Im	Norm	Order
-0.5434	1.3539	1.4589	1
-0.5434	-1.3539	1.4589	2
0.2255	1.4250	1.4427	3
0.2255	-1.4250	1.4427	4
-0.8678	0.0000	0.8678	5

Section 2

```
set.seed(23)
ens <- RME_norm(N = 3, mean = 0, sd = 1, size = 3)
spectrum_ens <- spectrum(ens)
# Outputs the following
spectrum_ens
```

```
##        Re      Im   Norm Order
```

```
## 1  1.7581  0.0000 1.7581     1
## 2 -0.2614  1.0012 1.0347     2
## 3 -0.2614 -1.0012 1.0347     3
## 4  1.2327  0.4227 1.3032     1
## 5  1.2327 -0.4227 1.3032     2
## 6 -0.8504  0.0000 0.8504     3
## 7 -0.5296  1.0508 1.1767     1
## 8 -0.5296 -1.0508 1.1767     2
## 9  0.7357  0.0000 0.7357     3
```

```
\begin{lstlisting}[language=R]
library(RMAT)
P <- RM_norm(N = 5, mean = 0, sd = 1)
spectrum_P <- spectrum(P)
# Outputs the following
spectrum_P
...
\end{lstlisting}
```