**N =2**

W = 1 1

1 -1

**N =3**

W = 1 1 1

1 -0.5 – j 0.866 -0.5 + j 0.866

1 -0.5 + j 0.866 -0.5 – j 0.866

**N =4**

W = 1 1 1 1

1 – j –1 j

1 –1 1 –1

1 j –1 –j

**N =5**

W =

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1 | 1 | 1 | 1 | 1 |
| 1 | 0.31 - 0.95i | -0.81 - 0.59i | -0.81 + 0.59i | 0.31 + 0.95i |
| 1 | -0.81 - 0.59i | 0.31 + 0.95i | 0.31 - 0.95i | -0.81 + 0.59i |
| 1 | -0.81 + 0.59i | 0.31 - 0.95i | 0.31 + 0.95i | -0.81 - 0.59i |
| 1 | 0.31 + 0.95i | -0.81 + 0.59i | -0.81 - 0.59i | 0.31 - 0.95i |

**N =6**

W =

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.5 - 0.87i | -0.5 - 0.87i | -1 | -0.5 + 0.87i | 0.5 + 0.87i |
| 1 | -0.5 - 0.87i | -0.5 + 0.87i | 1 | -0.5 - 0.87i | -0.5 + 0.87i |
| 1 | -1 | 1 | -1 | 1 | -1 |
| 1 | -0.5 + 0.87i | -0.5 - 0.87i | 1 | -0.5 + 0.87i | -0.5 - 0.87i |
| 1 | 0.5 + 0.87i | -0.5 + 0.867i | -1 | -0.5 - 0.87i | 0.5 - 0.87i |