

Subgroups of Z12

```
In[1]:= z12 = Range[12] - 1
```

```
Out[1]= {0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11}
```

```
In[2]:= mod12[x_] := Mod[x, 12]
```

```
cyclicGroupGeneratedBy[n_] := Map[mod12, n z12] // Union
```

```
cyclicGroupGeneratedBy[4]
```

```
Out[4]= {0, 4, 8}
```

```
In[5]:= subgroupsOfZ12 =
```

```
Map[cyclicGroupGeneratedBy, z12] // Union // TableForm
```

```
Out[5]/TableForm=
```

0											
0	6										
0	4	8									
0	3	6	9								
0	2	4	6	8	10						
0	1	2	3	4	5	6	7	8	9	10	11