In [1]:

```
import warnings
warnings.filterwarnings("ignore")
```

In [3]:

```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
%matplotlib inline
```

In [5]:

```
from statsmodels.tsa.seasonal import seasonal_decompose
```

In [12]:

```
df = pd.read_csv('/content/Sales_Data.csv')
df.isnull().sum()
```

Out[12]:

```
Month    0
Qty      2
dtype: int64
```

In [13]:

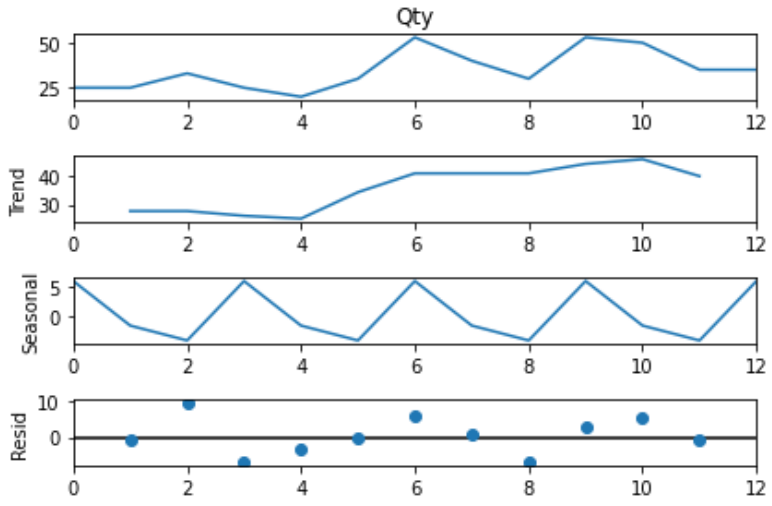
```
df['Qty'] = np.round(df['Qty'].fillna(df['Qty'].mean()),0)
```

In [15]:

```
decompose = seasonal_decompose(x = df['Qty'], model = 'additive', period = 3)
```

In [32]:

```
decompose_plot = decompose.plot()
```



In [33]:

```
df['seasonal'] = decompose.seasonal
df['trend'] = decompose.trend
```

In [34]:

```
df
```

Out[34]:

	Month	Qty	seasonal	trend
	Month	Qty	seasonal	trend
0	Jan-21	25.0	6.009259	NaN
1	Feb-21	25.0	-1.712963	27.666667
2	Mar-21	33.0	-4.296296	27.666667
3	Apr-21	25.0	6.009259	26.000000
4	May-21	20.0	-1.712963	25.000000
5	Jun-21	30.0	-4.296296	34.333333
6	Jul-21	53.0	6.009259	41.000000
7	Aug-21	40.0	-1.712963	41.000000
8	Sep-21	30.0	-4.296296	41.000000
9	Oct-21	53.0	6.009259	44.333333
10	Nov-21	50.0	-1.712963	46.000000
11	Dec-21	35.0	-4.296296	40.000000
12	Jan-22	35.0	6.009259	NaN

In [ ]: