In [1]:

```
import pandas as pd
import numpy as np
import seaborn as sns
```

In [2]:

```
dataset = pd.read_excel('QVI_transaction_data.xlsx')
```

In [3]:

```
dataset.head()
```

Out[3]:

	DATE	STORE_NBR	LYLTY_CARD_NBR	TXN_ID	PROD_NBR	PROD_NAME	PROD_QTY	TOT_SALES
0	43390	1	1000	1	5	Natural Chip Compny SeaSalt175g	2	6.0
1	43599	1	1307	348	66	CCs Nacho Cheese 175g	3	6.3
2	43605	1	1343	383	61	Smiths Crinkle Cut Chips Chicken 170g	2	2.9
3	43329	2	2373	974	69	Smiths Chip Thinly S/Cream&Onion 175g	5	15.0
4	43330	2	2426	1038	108	Kettle Tortilla ChpsHny&Jlpno Chili 150g	3	13.8

SUMMARIZATION

In [4]:

```
dataset.describe()
```

Out[4]:

	DATE	STORE_NBR	LYLTY_CARD_NBR	TXN_ID	PROD_NBR	PROD_QTY	TOT_SALES
count	264836.000000	264836.00000	2.648360e+05	2.648360e+05	264836.000000	264836.000000	264836.000000
mean	43464.036260	135.08011	1.355495e+05	1.351583e+05	56.583157	1.907309	7.304200
std	105.389282	76.78418	8.057998e+04	7.813303e+04	32.826638	0.643654	3.083226
min	43282.000000	1.00000	1.000000e+03	1.000000e+00	1.000000	1.000000	1.500000
25%	43373.000000	70.00000	7.002100e+04	6.760150e+04	28.000000	2.000000	5.400000
50%	43464.000000	130.00000	1.303575e+05	1.351375e+05	56.000000	2.000000	7.400000
75%	43555.000000	203.00000	2.030942e+05	2.027012e+05	85.000000	2.000000	9.200000
max	43646.000000	272.00000	2.373711e+06	2.415841e+06	114.000000	200.000000	650.000000

In [5]:

```
dataset.isnull().sum()
```

Out[5]:

```
DATE              0
STORE_NBR         0
LYLTY_CARD_NBR    0
TXN_ID            0
PROD_NBR          0
PROD_NAME         0
PROD_QTY          0
TOT_SALES         0
dtype: int64
```

CHECKING FOR OUTLIERS

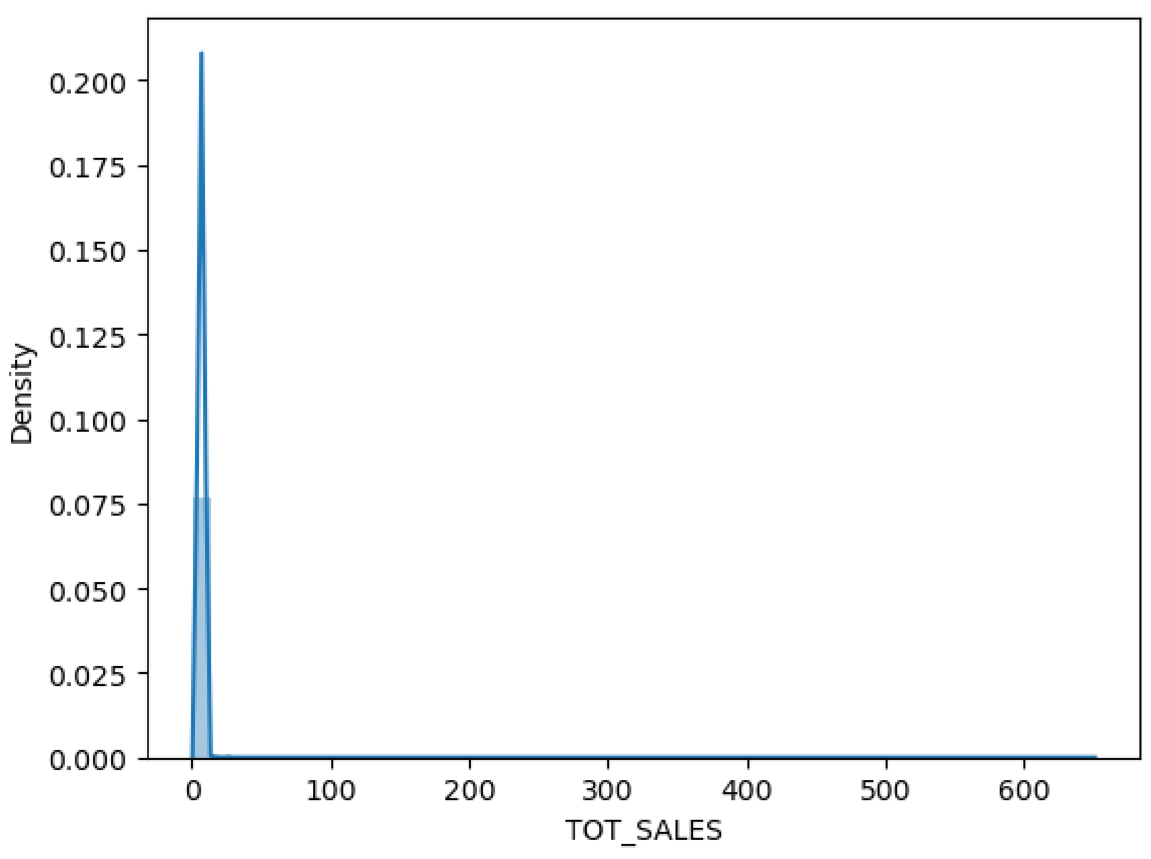
In [6]:

```
sns.distplot(dataset.TOT_SALES, kde = True)
```

```
C:\ProgramData\Anaconda3\lib\site-packages\seaborn\distributions.py:2619: FutureWarning: `distplot` is a deprecated function and will be removed in a future version. Please adapt y
our code to use either `displot` (a figure-level function with similar flexibility) or `histplot` (an axes-level function for histograms).
  warnings.warn(msg, FutureWarning)
```

Out[6]:

```
<AxesSubplot:xlabel='TOT_SALES', ylabel='Density'>
```



In [7]:

```
numericdata = dataset.select_dtypes(['float', 'int'])
```

In [8]:

```
numericdata.head()
```

Out[8]:

	DATE	STORE_NBR	LYLTY_CARD_NBR	TXN_ID	PROD_NBR	PROD_QTY	TOT_SALES
0	43390	1	1000	1	5	2	6.0
1	43599	1	1307	348	66	3	6.3
2	43605	1	1343	383	61	2	2.9
3	43329	2	2373	974	69	5	15.0
4	43330	2	2426	1038	108	3	13.8

REMOVING OUTLIERS

In [9]:

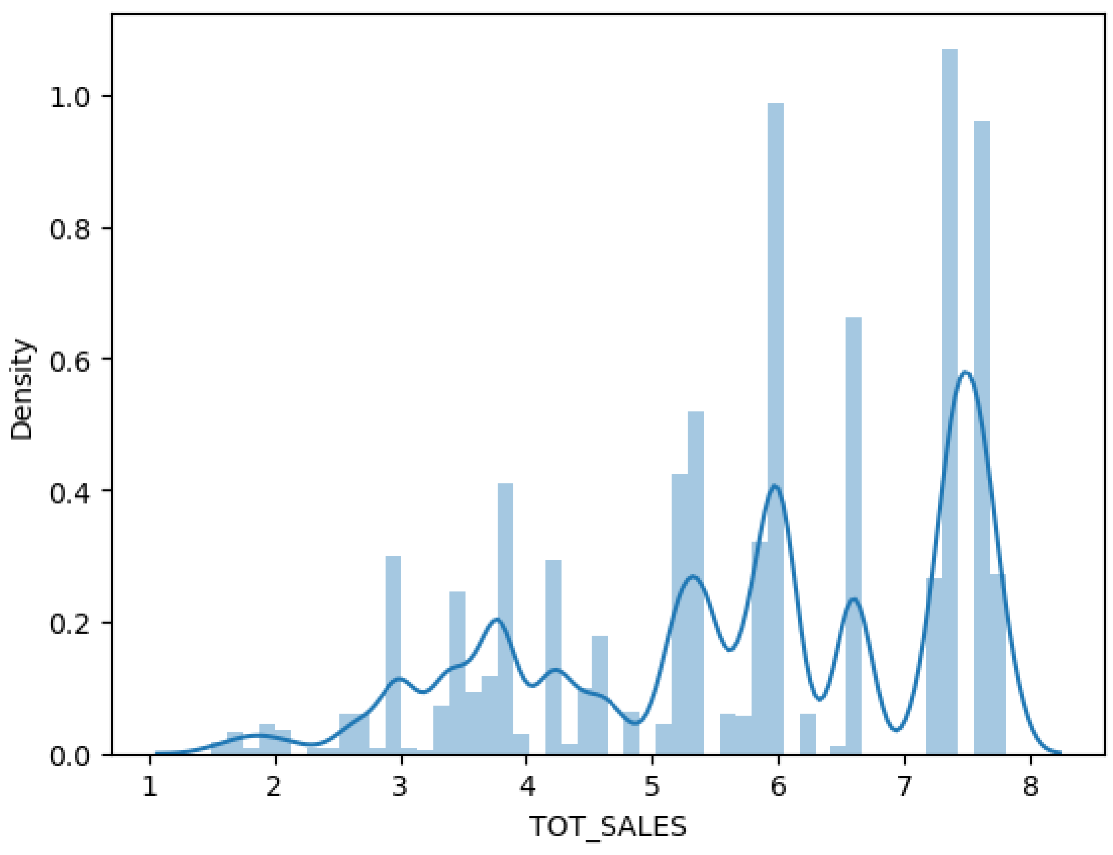
```
x = numericdata[numericdata['TOT_SALES'] < 8.000]
```

In [11]:

```
sns.distplot(x.TOT_SALES, kde = True)
```

Out[11]:

```
<AxesSubplot:xlabel='TOT_SALES', ylabel='Density'>
```



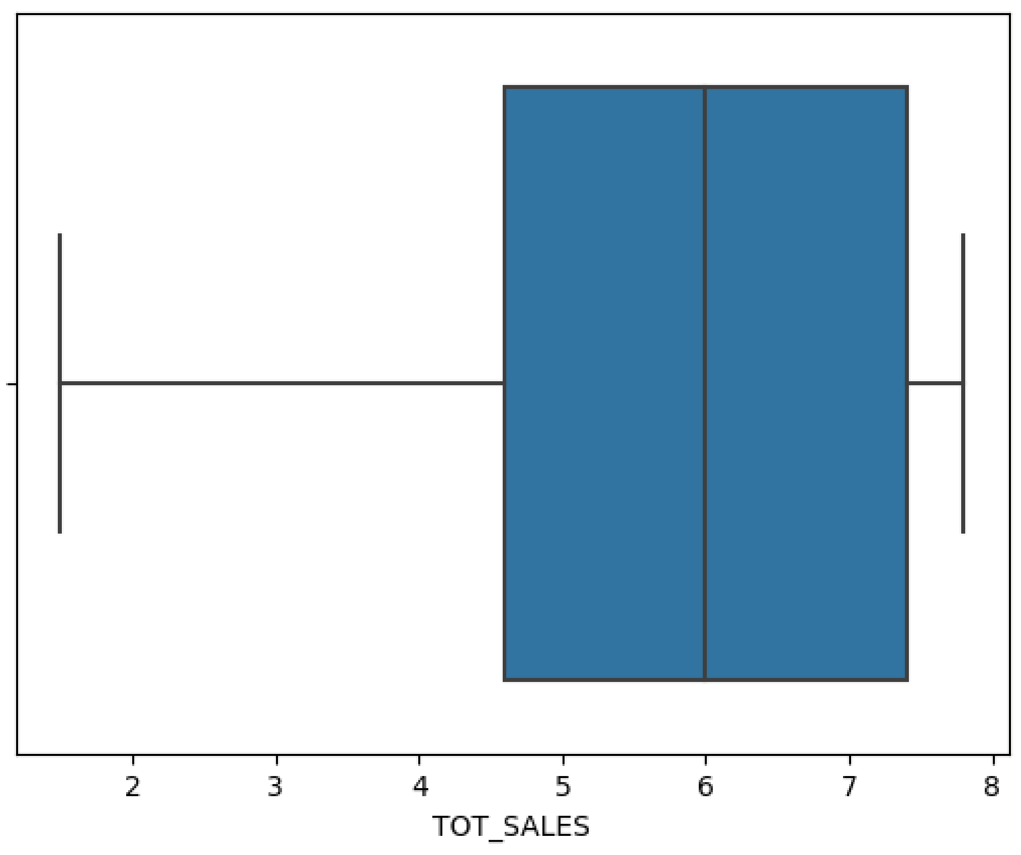
In [12]:

```
sns.boxplot(x.TOT_SALES)
```

```
C:\ProgramData\Anaconda3\lib\site-packages\seaborn\_decorators.py:36: FutureWarning: Pass the following variable as a keyword arg: x. From version 0.12, the only valid positional a
rgument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.
  warnings.warn(
```

Out[12]:

```
<AxesSubplot:xlabel='TOT_SALES'>
```



DATA FORMATS

In [13]:

```
dataset.dtypes
```

Out[13]:

```
DATE                int64
STORE_NBR           int64
LYLTY_CARD_NBR      int64
TXN_ID              int64
PROD_NBR            int64
PROD_NAME          object
PROD_QTY            int64
TOT_SALES         float64
dtype: object
```

In [ ]: