How do I use a log scale in Seaborn plots?

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Using a log scale in Seaborn plots allows for better visualization of data that has a wide range of values. This is achieved by transforming the data into a logarithmic scale, which compresses the larger values and expands the smaller values. To use a log scale in Seaborn plots, the user can specify the scale parameter as 'log' in the desired plot function. This will result in the x and/or y axis being displayed in a logarithmic scale. This feature is particularly useful when dealing with data that has a large range of values, as it helps to display the data in a more visually appealing and comprehensive manner.

Use a Log Scale in Seaborn Plots

You can use the plt.xscale() and plt.yscale() functions to use a log scale for the x-axis and y-axis, respectively, in a seaborn plot:

```
import matplotlib.pyplotas plt
import seaborn as sns

#create scatterplot with log scale on both axes
sns.scatterplot(data=df, x='x', y='y')
plt.xscale('log')
plt.yscale('log')
```

The following example shows how to use these functions in practice.

Example: Use Log Scale in Seaborn Plot

Suppose we have the following pandas DataFrame:

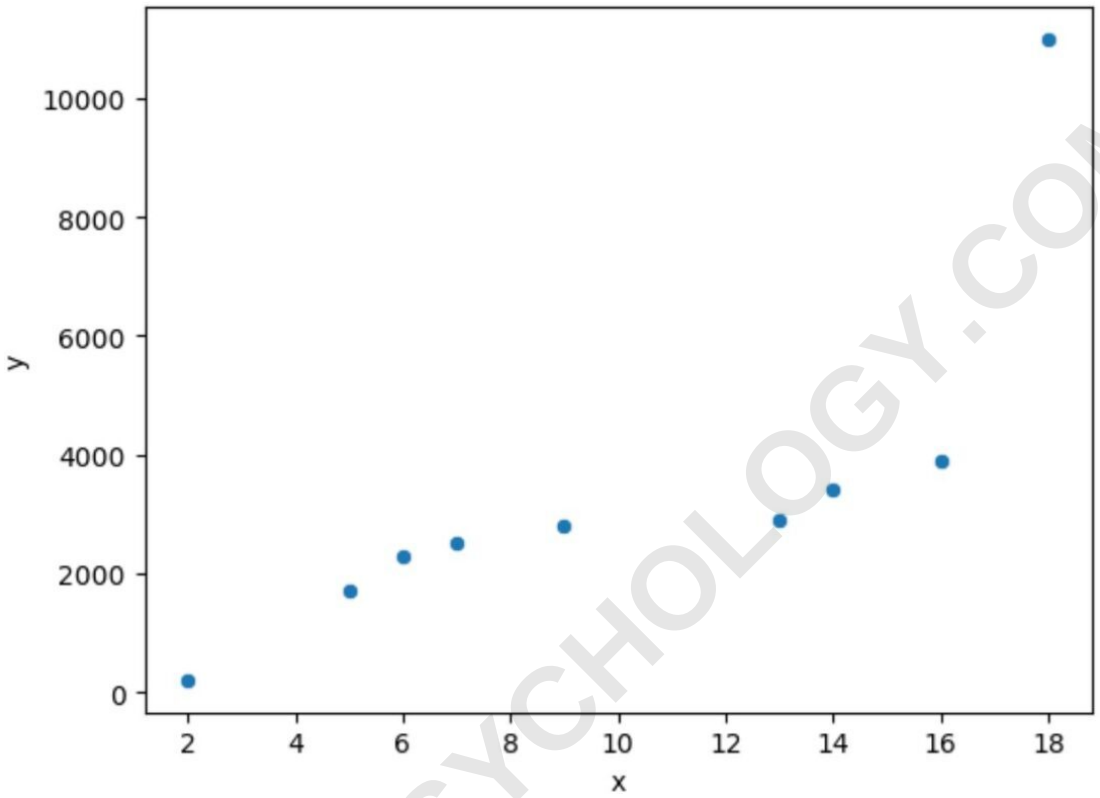
```
import pandas as pd

#create DataFrame
df = pd.DataFrame({'x': ,
'y': })

#view DataFrame
print(df)
```

x y
0 2 200
1 5 1700
2 6 2300
3 7 2500
4 9 2800
5 13 2900
6 14 3400
7 16 3900
8 18 11000

We can use the scatterplot() function in seaborn to create a scatterplot that uses a linear scale on both the x-axis and y-axis:

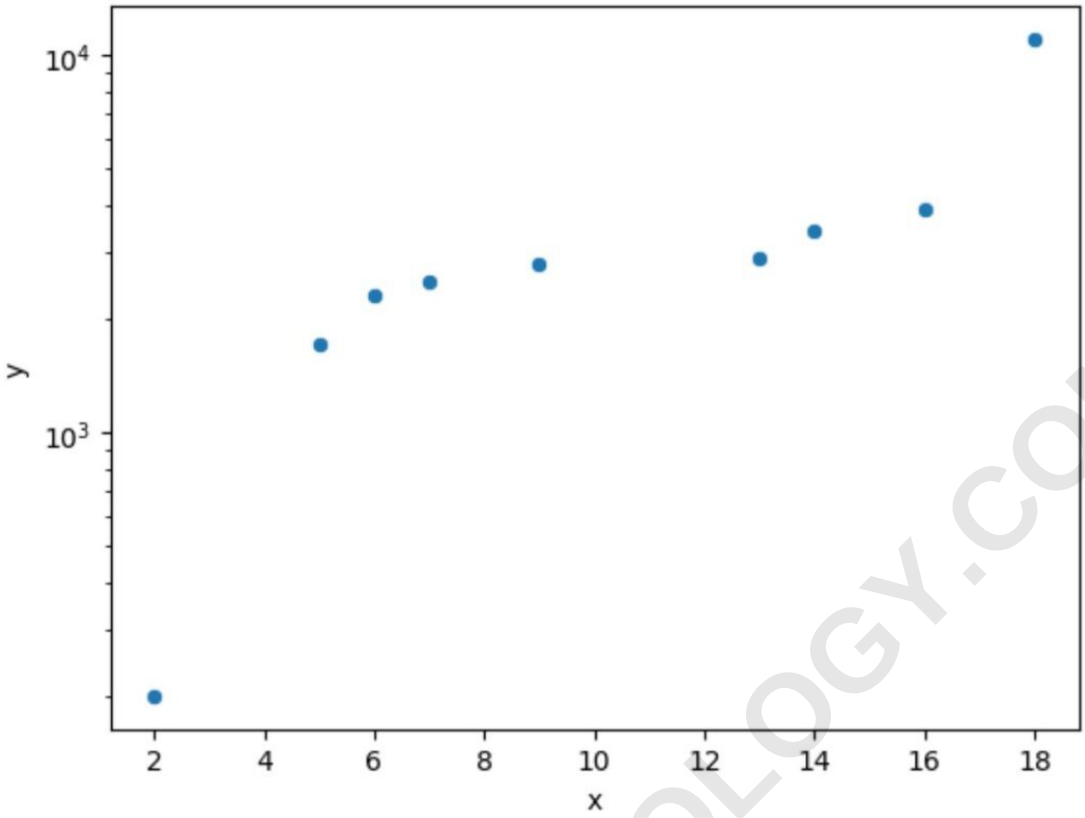
```
import seaborn as sns
```

```
#create scatterplot with default axis scales
sns.scatterplot(data=df, x='x', y='y')
```



To use a log scale for the y-axis only, we can use the following syntax:

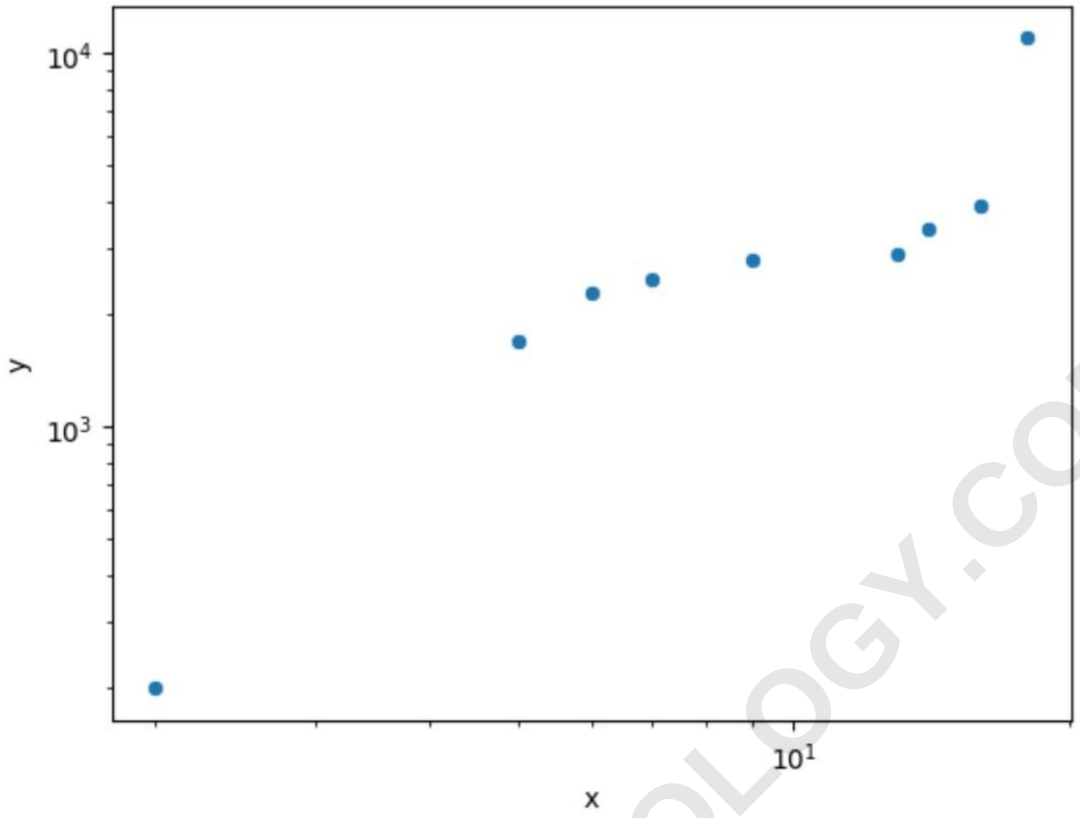
```
import matplotlib.pyplotas plt
import seaborn as sns

#create scatterplot with log scale on y-axis
sns.scatterplot(data=df, x='x', y='y')
plt.yscale('log')
```



Notice that the y-axis now uses a log scale.

We can also use a log scale on the x-axis if we'd like:

```
import matplotlib.pyplotas plt
import seaborn as sns

#create scatterplot with log scale on both axes
sns.scatterplot(data=df, x='x', y='y')
plt.yscale('log')
plt.xscale('log')
```



Notice that both axes now use a log scale.

The following tutorials explain how to perform other common tasks in seaborn: