In [8]:
```
import pandas as pd
import numpy as np
from scipy import stats
```

In [2]:
```
fuel = pd.read_excel("Fuel_paired T test.xlsx")
fuel
```

Out[2]:

	Without additive	With Additive
0	12.5	20.0
1	19.0	22.0
2	15.0	18.5
3	19.5	22.5
4	12.5	15.0
5	16.0	16.0
6	14.5	13.5
7	17.5	16.0
8	20.0	22.5
9	17.0	16.0

In [3]:
```
fuel.shape
```

Out[3]:
```
(10, 2)
```

In [4]:
```
fuel.head()
```

Out[4]:

	Without additive	With Additive
0	12.5	20.0
1	19.0	22.0
2	15.0	18.5
3	19.5	22.5
4	12.5	15.0

In [5]:
```
fuel1 = pd.Series(fuel.iloc[:,0])
fuel1
```

Out[5]:
```
0    12.5
1    19.0
2    15.0
3    19.5
4    12.5
5    16.0
6    14.5
7    17.5
8    20.0
```

```
9    17.0
Name: Without additive, dtype: float64
```

In [6]:
```
fuel2 = pd.Series(fuel.iloc[:,1])
fuel2
```

Out[6]:
```
0    20.0
1    22.0
2    18.5
3    22.5
4    15.0
5    16.0
6    13.5
7    16.0
8    22.5
9    16.0
Name: With Additive, dtype: float64
```

In [7]:
```
stats.ttest_ind(fuel1,fuel2)
```

Out[7]:
```
Ttest_indResult(statistic=-1.3515496418540627, pvalue=0.19326168065891025)
```

In [9]:
```
np.corrcoef(fuel1,y = fuel2)
```

Out[9]:
```
array([[1.        , 0.60348166],
       [0.60348166, 1.        ]])
```

In [10]:
```
p_value = stats[-1]
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-10-c05158cc96fe> in <module>
----> 1 p_value = stats[-1]

TypeError: 'module' object is not subscriptable
```

In [ ]:
```

```