In [1]:
```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
```

In [2]:
```
df = pd.read_csv('multiple_linear_regression.csv')
df
```

Out[2]:

	Feature 1	Feature 2	Feature 3	Target
0	230.1	37.8	69.2	22.1
1	44.5	39.3	45.1	10.4
2	17.2	45.9	69.3	9.3
3	151.5	41.3	58.5	18.5
4	180.8	10.8	58.4	12.9
...	...	...	...	...
195	38.2	3.7	13.8	7.6
196	94.2	4.9	8.1	9.7
197	177.0	9.3	6.4	12.8
198	283.6	42.0	66.2	25.5
199	232.1	8.6	8.7	13.4

200 rows × 4 columns

In [3]:
```
x = df.iloc[:,:-1]
y = df.iloc[:,-1:]
```

In [4]:
```
from sklearn.model_selection import train_test_split
x_train,x_test,y_train,y_test = train_test_split(x,y,test_size= 0.2,random_sta
```

In [5]:
```
x_train.shape
```

Out[5]: (160, 3)

In [6]:
```
x_test.shape
```

Out[6]: (40, 3)

In [7]:
```
from sklearn.linear_model import LinearRegression
```

In [8]:
```
lr = LinearRegression()
lr.fit(x_train,y_train)
```

Out[8]:
```
▾ LinearRegression

LinearRegression()
```

In [9]:
```
y_pred = lr.predict(x_test)
```

In [10]:
```
lr.coef_
```

Out[10]:
```
array([[ 0.04458402,  0.19649703, -0.00278146]])
```

In [11]:
```
lr.intercept_
```

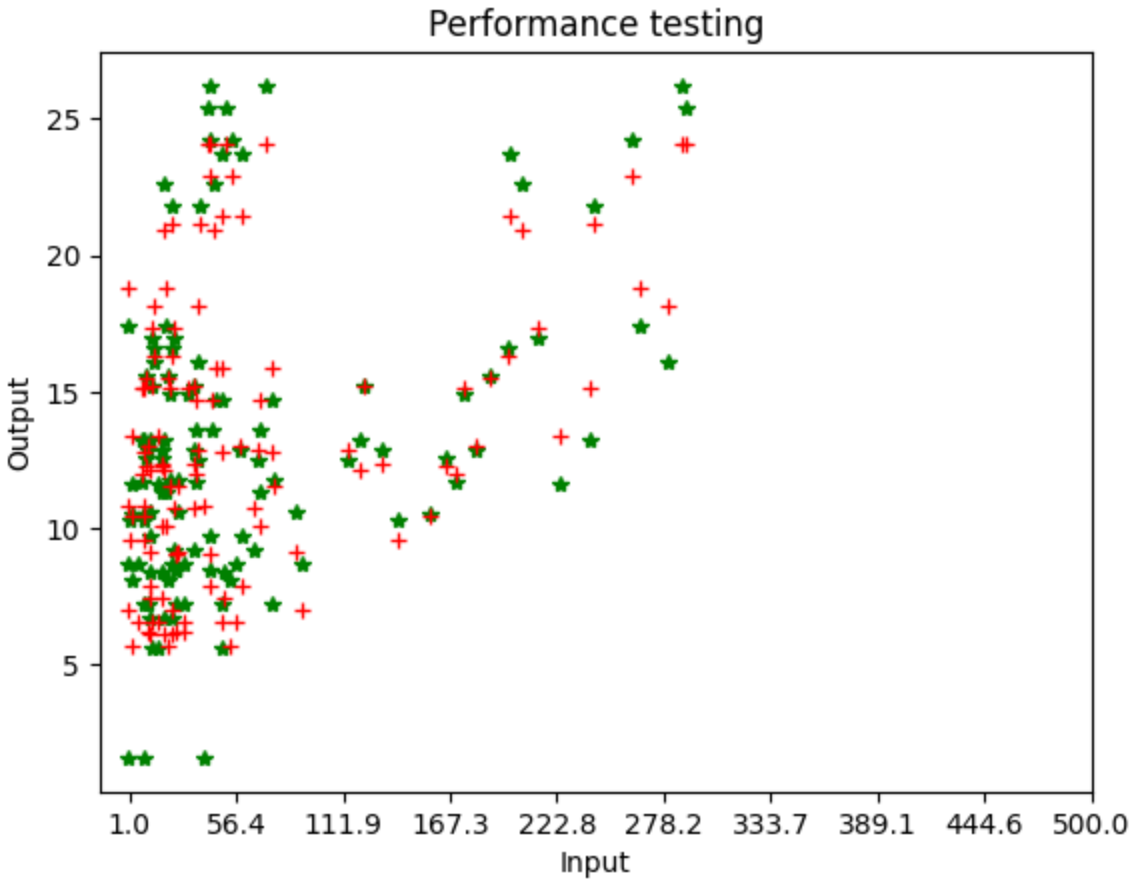
Out[11]:
```
array([2.99489303])
```

In [12]:
```
from sklearn.metrics import mean_squared_error
```

In [13]:
```
mean_squared_error(y_test,y_pred)
```

Out[13]:
```
4.402118291449685
```

In [14]:
```
plt.plot(x_test, y_test, "*", color = "green")
plt.plot(x_test, y_pred, "+", color = "red")
plt.title("Performance testing")
plt.xlabel("Input")
plt.xticks(np.linspace(1, 500, 10))
plt.ylabel("Output")
plt.show()
```



In [ ]: