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In [2]: import numpy as np
import matplotlib.pyplot as plt
import pandas as pd

dataset = pd.read_csv(r"C:\Users\shaik\OneDrive\Desktop\classroom\40- 22nd sim

x = dataset.iloc[:, :-1]
y = dataset.iloc[:, -1]

from sklearn.model_selection import train_test_split
x_train, x_test, y_train, y_test = train_test_split(x, y, test_size=0.20, random

from sklearn.linear_model import LinearRegression
regressor = LinearRegression()
regressor.fit(x_train, y_train)

y_pred = regressor.predict(x_test)

comparison = pd.DataFrame({'Actual': y_test, 'Predicted': y_pred})
print(comparison)

plt.scatter(x_test, y_test, color = 'red') # Real salary data (testing)
plt.plot(x_train, regressor.predict(x_train), color = 'blue') # Regression line
plt.title('Salary vs Experience (Test set)')
plt.xlabel('Years of Experience')
plt.ylabel('Salary')
plt.show()

m = regressor.coef_
print(m)

c = regressor.intercept_
print(c)

y_12 = m * 12 + c
print(y_12)

y_20 = m * 20 + c
print(y_20)

y_10 = m * 10 + c
print(y_10)

```

	Actual	Predicted
2	37731	40748.961841
28	122391	122699.622956
13	57081	64961.657170
10	63218	63099.142145
26	116969	115249.562855
24	109431	107799.502753



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[9312.57512673]  
26780.09915062818  
[138531.00067138]  
[213031.60168521]  
[119905.85041792]
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In []: