

1. Linear regression is an Algorithm to predict a Continuous response variable based on a set of continuous regressors

Ans b

2. In the given example, Sales is the response

Ans b

3. In the given example, Advertising is the Regressor

Ans d

4. The quantities h_i are Regression coefficients

Ans c

5. The regression coefficient vector from the training data is determined as

$$\bar{\mathbf{h}} = (\mathbf{X}^T \mathbf{X})^{-1} \mathbf{X}^T \bar{\mathbf{y}}$$

Ans a

6. The linear regression module can be imported in PYTHON as
from sklearn.linear_model import LinearRegression

Ans b

7. Metric used to characterize performance of linear regression is
Both r2_score and mean_squared_error

Ans c

8. The train_test_split subroutine is imported as
from sklearn.model_selection import train_test_split

Ans c

9. The Boston dataset comprises of
information concerning housing in the area of Boston Mass

Ans b

10. The linear regression model can be applied as

```
reg = LinearRegression()  
reg.fit(X_train, y_train)
```

Ans d