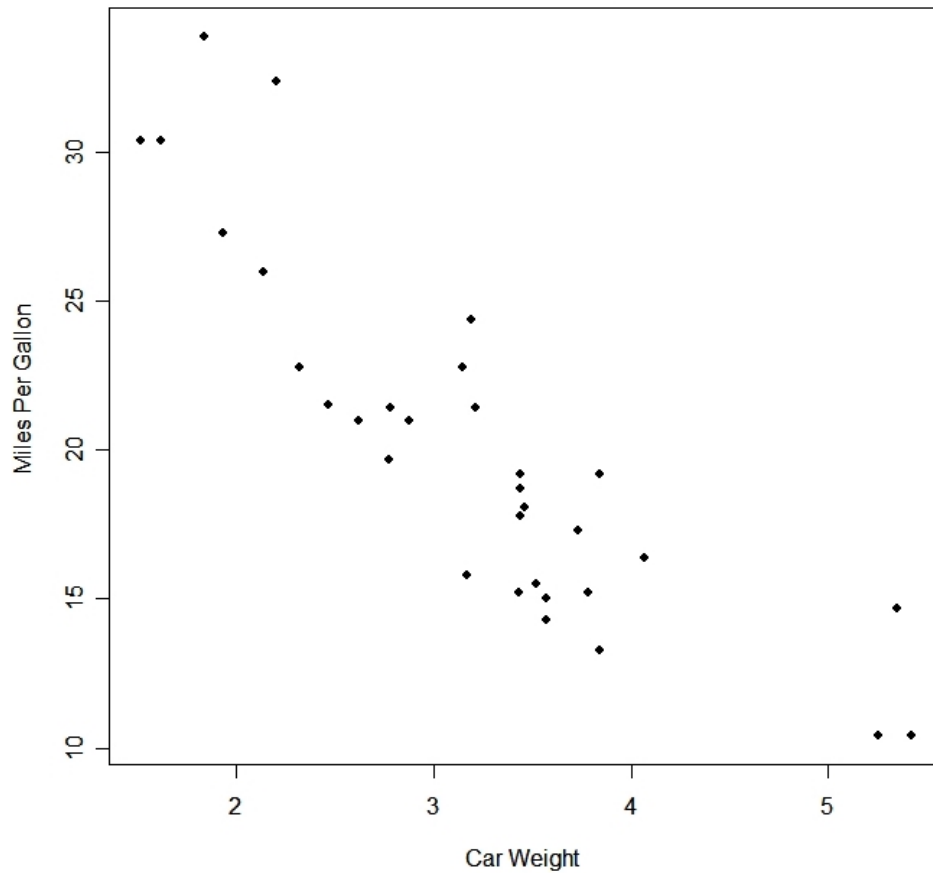# <u>Correlation</u>

1. The figure below plots the miles per gallon against weight of the car. Which of the following statements is true?



- There is a positive relationship between weight of the car and miles per gallon.

- There is a perfect linear relationship between car weight and fuel efficiency.

- Weight of the car is the dependent variable and miles per gallon is the independent variable.

- Each point on the graph refers to the weight and miles per gallon of a particular car.

2. Identify the correct statement.

- If the correlation between X and Y is 1, this means that X causes Y
- It is possible to have two variables that are positively correlated but have a negative covariance.
- The covariance is scaled to take values between -1 and 1
- A strong correlation does not tell us which is the dependent and which is the independent variable