

Identifying Linearity: Record Your Own Uber Fare Data

Make sure you collect the data during a short time interval so that traffic fluctuation does not affect the data. Decide on five routes that all start at the same location. Use the Google Maps app to map the same trip from point to point. This will give you an estimate of the distance and estimated time to complete the route. Then use the Uber app to record the fare cost for these routes (make sure to cancel each route before you actually order a ride).

Route beginning at _____ and ending ...	Miles x	Estimated time t	Uber fare U

Let's see if we can figure out how an Uber fare is calculated.

Calculate the slope between each pair of points if miles is used as the independent variable. Then calculate the slope between each pair of points if time is used as the independent variable.

Which independent variable produces a more consistent slope (miles or time)? What is the meaning of that slope?