



Fuel Efficiency

Have you ever shopped for a new car with your family? Perhaps you have visited a car lot or shopped for cars online. In either case, you may have noticed a car's fuel efficiency rating. A car's fuel efficiency, or economy, describes a relationship between distance and fuel consumption.

In the US, a car's fuel efficiency is expressed as the distance a car travels per unit volume of fuel. The distance traveled is x miles, and the volume of fuel is y gallons. So, fuel economy is expressed as miles per gallon.



Task

Work in small groups to research the factors that affect a vehicle's fuel efficiency.

- 1 Choose three different car manufacturers and one car model built by each manufacturer. Select different car models, such as coupes, sedans, SUVs, and trucks. Note the fuel-efficiency rating of each car.
- 2 Use the fuel-efficiency ratings to write equations representing the functions relating distance traveled per volume of fuel. Use graph paper to graph the functions for the three car models on the same coordinate plane.
- 3 Write a description of each model's fuel economy and the factors that affect it. Share your work. Discuss potential economic, social, and environmental implications of your findings as a class.

