

Adriana recently bought a new car and is keeping track of the miles she drives and the gas she uses.

- a. One week Adriana drove 258 miles and used 6.2 gallons of gas. For that week, what was the average number of miles she drove per gallon of gas used? Show or explain how you got your answer.
- b. When she goes on vacation, Adriana expects to drive 630 miles. She also expects to drive an average of 45 miles per gallon of gas used. How much gas, in gallons, should she expect to use on her vacation? Show or explain how you got your answer.

Adriana's car has displays that show both speed and gas mileage, as defined below:

- Speed is the number of miles per hour at which the car is traveling.
  - Gas mileage is the number of miles traveled per gallon of gas used.
- c. On her drive to work one day, Adriana looked at her car's displays.
    - Her speed was 30 miles per hour.
    - Her gas mileage was 40 miles per gallon.

At these rates, how many gallons of gas would she use in **one hour**? Show or explain how you got your answer.

- d. The gas tank in Adriana's car holds 18 gallons of gas when it is full. Based on the same speed and gas mileage as in part (c), how many hours could Adriana drive using one entire tankful of gas? Show or explain how you got your answer.