

Chapter 1

Functions and Graphs

Exercise Solution

Exercise 1.1.53

Instruction

A vehicle has a 20-gal tank and gets 15 mpg. The number of miles N that can be driven depends on the amount of gas x in the tank.

- (a) Write a formula that models the situation.
- (b) Determine the number of miles the vehicle can travel on (i) a full tank of gas and (ii) $3/4$ of a tank of gas.
- (c) Determine the domain and range of the function.
- (d) Determine how many times the driver had to stop for gas if she has driven a total 578 miles.

Solution

- (a) A gallon makes the vehicle go 15 miles, this means that the function that describes the number of miles N that can be driven on x gallons of gas is $N(x) = 15x$.
- (b) TODO
- (c) TODO
- (d) TODO

Answer

- (a) TODO
- (b) TODO

(c) TODO

(d) TODO