It has already been stated that if you know the *distance travelled* in a car, and the *fuel used (in litres)*, that we can calculate the fuel economy. The next example shows how that is done:

Example 7: Determining a Vehicle's Fuel Economy

A car with a full tank of gas travelled 612 km before it needed gas again. If the car took 53.8 L of gas to fill, find the fuel economy for the car.

$$\text{Fuel economy (L/km)} = \frac{(\text{litres used} \times 100\text{km})}{\text{distance travelled}}$$

$$\frac{x}{100\text{km}} = \frac{53.8\text{L}}{612\text{km}} = \frac{53.8\text{L} \times 100\text{km}}{612\text{km}}$$

$$x = \frac{53.8\text{L} \times 100\text{km}}{612\text{km}} = 8.79\text{L}/100\text{km}$$

$$= 8.79\text{L}/100\text{km}$$

Example 8: Determining a Vehicle's Fuel Economy

You are interested in purchasing a new Toyota Tundra truck.

You take a test model on an extended test drive. The fuel tank was full when you started. At the beginning of the test drive, the odometer reads 109.3 km. At the end of the test drive, the odometer reads 198.8 km. You fill up the gas tank at the end of the test drive and find you used 12.5 L of fuel. Determine the fuel economy for this truck.

$$\text{Fuel economy (L/100km)} = \frac{\text{litres used} \times 100\text{km}}{\text{distance travelled}}$$

Given

① Distance travelled $= 198.8 - 109.3$

Distance $= 89.5\text{km}$

② Litres of fuel used $= 12.5\text{L}$

$$= \frac{12.5\text{L} \times 100\text{km}}{89.5\text{km}}$$

$$= 13.97\text{L}/100\text{km}$$