

# Model: Constant Fuel Consumption

## Fluxion Example Description

### 1 Background

The change in the amount of fuel contained in an automobile tank is given by the following simple differential equation:

$$Fuel' = -\frac{FuelConsumption}{100} \quad (1)$$

The fuel consumption rate is stated in units of liters of fuel for every 100 km driven. By setting  $Fuel(x_0) = 35.4$  the initial fuel content in the tank is defined. The termination condition for the calculation is reached whenever  $Fuel < 0$ .

As expected, a car with an initial fuel content as given and a mileage (FuelConsumption) of 5.9 liters for every 100 km driven will travel for a distance of 600 km.