

Data Structure: MotorVehicle

Consider the following definition for a data structure called *MotorVehicle*:

A *MotorVehicle* is a **model**, **year**, **color**, and **price**

```
data MotorVehicle:  
  | vehicle(  model :: String,  
              year  :: Number,  
              color  :: String,  
              price  :: Number )  
end
```

To make instances of this structure, I would write:

vehicleA = **vehicle("Audi", 2006, "red", 30000)**

vehicleB = **vehicle("Ford", 1990, "green", 12000)**

Choose one of your above instances, and note which dot-accessors you would use to access each of its fields:

vehicleA.model

vehicleA.year

vehicleA.color

vehicleA.price

Which of the following are functions that *could* be written based on the data definition for **MotorVehicle**? Check all that apply

- ☐ `# same-license : MotorVehicle, String -> Boolean`
`# Consumes a MotorVehicle and String, produces true if the`
`# given MotorVehicle's license plate is the same as the`
`# given String`
- ☒ `# how-old : MotorVehicle, Number -> Number`
`# consumes a MotorVehicle and a year. Produces the age of`
`# the vehicle by subtracting its year from the given year.`
- ☒ `# more-expensive : MotorVehicle, MotorVehicle -> Boolean`
`# consumes two MotorVehicles and produces true if the first`
`# MotorVehicle is more expensive than the second`
- ☐ `# is-under-warranty : MotorVehicle -> Boolean`
`# Consumes a MotorVehicle, produces true if the given`
`# MotorVehicle has a mileage of less than 100,000 miles`
- ☒ `# paint-job : MotorVehicle -> MotorVehicle`
`# Consumes a MotorVehicle and produces a MotorVehicle which`
`# is the same as the given MotorVehicle, but painted red`