

Problem

Lara lives in Strabane and has decided to buy an economical car that she hopes will be better for the environment. However, she is not sure whether to buy a car with:

- an unleaded hybrid engine; or
- a diesel engine.

Both cars are the same price and have the following fuel economies:

- The unleaded hybrid engine has 73 miles per gallon (mpg).
- The diesel engine has 66 mpg.

Lara is buying the car so that she can travel to and from work. She works in Donegal Town, which is a 32 mile drive from her house.

In her hometown of Strabane, petrol stations have the following prices per litre:

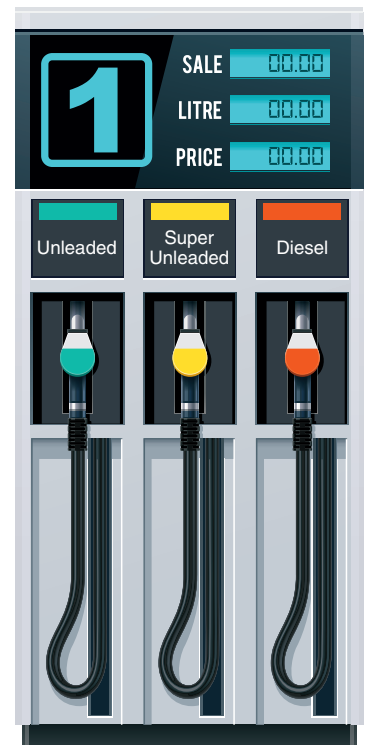
- Unleaded: 114.9p
- Diesel: 115.9p

In County Donegal, petrol stations have the following prices per litre:

- Unleaded: 129.9c
- Diesel: 120.9c

The current sterling to euro exchange rate is £1 = €1.10

Lara works five days a week and would prefer not to spend more than £25 a week, which is what she has budgeted for fuel. She would also like to keep the cost of fuel as small as possible.



Using all of the information provided, what advice would you give Lara when choosing which car to buy?

For this problem use the conversion: 1 gallon = 4.5 litres

