Fuel Economy Converter (km/L, L/100 km, mpg)

Convert vehicle or equipment fuel economy between kilometres per litre, litres per 100 km and miles per US and imperial gallon.

Method: Definitions: 1 mi = 1.609 344 km; 1 US gal = 3.785 411 784 L; ...

Input parameters

Unit system: SI

Parameter	Value	Unit
Value given as	km/L	
Value	12.000	

Calculated results

Parameter	Value	Unit
Kilometres per litre	12.000	
Litres per 100 km	8.3333	
Miles per US gallon	28.226	
Miles per imperial gallon	33.898	

Formula and method

$$\frac{L}{100\,km} = \frac{100}{km/L}, \quad mpg = \frac{km}{L} \cdot \frac{V_{gal}}{1.609344}$$

Variables

given	Value given as	-
x	Value	-
km/L	Kilometres per litre	-
$L/100km$	Litres per 100 km	-
mpg_{US}	Miles per US gallon	-
mpg_{UK}	Miles per imperial gallon	-

Method and standards

Definitions.

Assumptions and limits

- Exact unit definitions.

References

- Definitions: 1 mi = 1.609 344 km
- 1 US gal = 3.785 411 784 L
- 1 imp gal = 4.546 09 L

Report details

Report reference	FCC-6P8R-RJEZ (the same inputs always give the same reference)
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Calculator	Fuel Economy Converter (km/L, L/100 km, mpg)
Method last reviewed	12 November 2026
Software release	FireCAD Calc, release of 17 November 2026
Release checks	4 reference cases of this calculator, computed independently, are checked on every release

Results are for engineering estimation. Verify critical designs against the referenced standards and your own data.

This calculator online

https://calc.firecad.com/general/unit-conversions/fuel-economy-converter

Open this case on calc.firecad.com →

Reopens the calculator with the inputs of this report.