Speed Unit Converter (m/s, km/h, ft/min, mph, knot)

Convert a speed between metres per second, kilometres per hour, metres per minute, feet per second and per minute, miles per hour and knots.

Method: Unit definitions per NIST SP 811 and the SI Brochure (exact where defined)

Input parameters

Unit system: SI

Parameter	Value	Unit
Speed (choose its unit)	0.51444	m/s

Calculated results

Parameter	Value	Unit
metre per second	0.51444	m/s
kilometre per hour	1.8520	km/h
metre per minute	30.867	m/min
foot per second	1.6878	ft/s
foot per minute	101.27	ft/min
mile per hour	1.1508	mph
knot	1.00000	kn

Notes for this case

- km/h ÷ 3.6 = m/s.

Formula and method

$$x_{\text{unit}} = \frac{x_{SI}}{f_{\text{unit}}}$$

Variables

x	Speed (choose its unit)	m/s

Method and standards

Each unit's factor to the SI unit is held once in the unit registry.

Assumptions and limits

- Exact factors where the definition is exact.

References

- Unit definitions per NIST SP 811 and the SI Brochure (exact where defined)

Report details

Report reference	FCC-4K4F-DB5Q (the same inputs always give the same reference)
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Calculator	Speed Unit Converter (m/s, km/h, ft/min, mph, knot)
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Release checks	2 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/velocity-unit-converter

Open this case on calc.firecad.com →

Reopens the calculator with the inputs of this report.