Mole Conversion Chart

Conversion	Relationship	Example
Moles → Grams	grams = moles × molar mass	2 mol H_2 → 4 g
Grams → Moles	moles = grams ÷ molar mass	18 g H_2O → 1 mol
Moles → Particles	particles = moles × 6.022×10^{23}	1 mol CO_2 → 6.022×10^{23} molecules
Particles → Moles	moles = particles ÷ 6.022×10^{23}	1.204×10^{24} atoms → 2 mol
Moles → Volume (STP)	volume = moles × 22.4 L	0.5 mol O_2 → 11.2 L
Volume → Moles (STP)	moles = volume ÷ 22.4 L	44.8 L He → 2 mol