

NAME _____

Moles Conversions

DATE _____ PER _____

WATCH THE SIGNIFICANT FIGURES!

Convert to moles

	Given		chemical	X	Conversion factor			.=	Answer		
	numeral	unit			numeral	unit	chemical		numeral	unit	chemical
1.	0.04542	g	CO ₂	X	_____			.=			
2.	12.6	g	N ₂ O ₂	X	_____			.=			
3.	3.16x10 ¹⁸	molec	SeH ₂	X	_____			.=			
4.	9.11x10 ³¹	molec	SiCl ₄	X	_____			.=			
5.	15.12	g	XeF ₄	X	_____			.=			

Find mass in g

6.	0.003121	mol	CdSO ₄	X	_____			.=			
7.	2.41	mol	Ir ₂ O ₃	X	_____			.=			
8.	16,300	mol	Mn(NO ₃) ₂	X	_____			.=			
9.	3.2 x 10 ⁻⁴	mol	CHCl ₃	X	_____			.=			
10	4.68	mol	I ₃	X	_____			.=			

Two-step problems
Convert to mass in grams

	Given			Conversion factor 1			Conversion factor 2			Answer		
	numeral	unit	chem.	numeral	unit	chem.	numeral	unit	chem.	numeral	unit	chem.
1.	563,200	molec	NO ₂	X	_____		X	_____		.=		
2.	1.6x10 ²⁸	molec	SF ₆	X	_____		X	_____		.=		
3.	3.53x10 ²¹	molec	PBr ₃	X	_____		X	_____		.=		
4.	7.119x10 ¹	molec	BH ₃	X	_____		X	_____		.=		
5.	9.3 x 10 ³¹	molec	NiS ₂	X	_____		X	_____		.=		

Convert to number of molecules

6.	620	g	NaCl	X	_____		X	_____		.=		
7.	3.882	g	K ₂ O ₂	X	_____		X	_____		.=		
8.	0.0045	g	SbN	X	_____		X	_____		.=		
9.	1.23x10 ⁵	g	OF ₂	X	_____		X	_____		.=		
10	3.6 x 10 ⁻⁹	g	P ₄ O ₁₀	X	_____		X	_____		.=		