

### 3 M PRACTICE (MOLES, MOLECULES, AND MASS)

	moles	atoms		atoms	moles
1	3.00 moles carbon		11	$6.022 \times 10^{23}$ atoms H	
2	0.5 moles oxygen		12	$6.022 \times 10^{23}$ atoms C	
3	1 mole lithium		13	$6.022 \times 10^{23}$ atoms Xe	
4	2.2 moles sodium		14	$1.68 \times 10^{23}$ atoms N	
5	0.90 moles nitrogen		15	$8.85 \times 10^{24}$ atoms Na	
6	0.7 moles phosphorus		16	$2.53 \times 10^{21}$ atoms K	
7	1.2 moles chlorine		17	$4.78 \times 10^{26}$ atoms Li	
8	1.6 moles iron		18	$5.25 \times 10^{22}$ atoms Cu	
9	4.0 moles beryllium		19	$1.71 \times 10^{23}$ atoms Fe	
10	0.01 moles krypton		20	$7.53 \times 10^{26}$ atoms F	

	grams	atoms		atoms	grams
21	12.01 g carbon		31	$6.022 \times 10^{23}$ atoms O	
22	19 g aluminum		32	$6.022 \times 10^{23}$ atoms Ne	
23	17 g iron		33	$6.022 \times 10^{23}$ atoms Fe	
24	0.3 g helium		34	$1.68 \times 10^{23}$ atoms F	
25	2.1 g nitrogen		35	$8.85 \times 10^{24}$ atoms C	
26	7.21 g phosphorus		36	$2.53 \times 10^{21}$ atoms Al	
27	8.32 g neon		37	$4.78 \times 10^{26}$ atoms Si	
28	1.9 g carbon		38	$5.25 \times 10^{22}$ atoms C	
29	22 g sodium		39	$1.71 \times 10^{23}$ atoms Be	
30	19.1 g magnesium		40	$7.53 \times 10^{26}$ atoms Li	

	grams	moles		moles	grams
41	12.01 g carbon		51	1 mole C	
42	1 g oxygen		52	4.5 moles I	
43	13 g calcium		53	0.9 moles S	
44	2 g magnesium		54	2.2 moles B	
45	0.20 g potassium		55	5.3 moles He	
46	3.2 g chromium		56	2.9 moles Ne	
47	48 g aluminum		57	1.8 moles Ar	
48	13 g hydrogen		58	0.1 moles Ca	
49	10 g neon		59	2.2 moles Ca	
50	1.1 g zinc		60	1.1 moles Ni	

	grams	atoms	moles
61			1.00 mole copper
62		$3.68 \times 10^{23}$ atoms helium	
63	16 g chlorine		
64		$7.35 \times 10^{24}$ atoms carbon	
65			0.9 moles helium
66	1.7 g aluminum		
67		$8.99 \times 10^{21}$ atoms boron	
68			1.6 moles neon
69	22 g oxygen		
70			0.45 moles fluorine