

Physics 100 - Spring 2009 - Problem Set 6

- ① 2-6, p. 49, conc. exercise
- ② 2-7, p. 49, conc. ex.
- ③ 2-10, p. 49 ^{conc. ex.} The attached periodic chart might be helpful in doing this problem
- ④ 2-12, p. 49 conc. ex. helpful in doing this problem
- ⑤ 14-2, p. 350 conc. ex.
- ⑥ 14-3, p. 350 conc. ex.
- ⑦ 14-5, p. 350 conc. ex.
- ⑧ 14-8, p. 350 conc. ex.
- ⑨ 14-16, p. 350 conc. ex.
- ⑩ 14-21, p. 350 conc. ex.
- ⑪ 14-1, p. 351, problem
- ⑫ 14-2, p. 351, problem
- ⑬ What is quantum entanglement?

Los Alamos National Laboratory Chemistry Division

Periodic Table of the Elements

1A	H hydrogen 1.008	2A	He helium 4.003	3A																			3B																			4A																		5A																		6A																		7A																																																																																																																																															
1	Li metal 3.031	2	Be metal 9.012	3	Mg metal 24.32	4	Ca metal 40.08	5	Sc metal 44.96	6	Ti metal 47.90	7	V metal 50.94	8	Cr metal 51.98	9	Mn metal 54.94	10	Fe metal 55.85	11	Co metal 58.93	12	Ni metal 58.73	13	Al metal 26.99	14	Si nonmetal 28.09	15	P nonmetal 30.97	16	S nonmetal 32.07	17	Cl nonmetal 35.46	18	Ar nonmetal 39.95	19	K metal 39.10	20	Ca metal 40.08	21	Sc metal 44.96	22	Ti metal 47.90	23	V metal 50.94	24	Cr metal 51.98	25	Mn metal 54.94	26	Fe metal 55.85	27	Co metal 58.93	28	Ni metal 58.73	29	Cu metal 63.55	30	Zn metal 65.40	31	Ga metal 69.72	32	Ge nonmetal 72.58	33	As nonmetal 75.54	34	Se nonmetal 78.96	35	Br nonmetal 80.00	36	Kr nonmetal 83.80	37	Sr metal 80.92	38	Y metal 88.91	39	Zr metal 91.22	40	Nb metal 92.91	41	Mo metal 95.94	42	Rh metal 102.9	43	Tc metal 103.91	44	Ru metal 104.91	45	Pd metal 106.4	46	Ag metal 107.9	47	Cd metal 113.4	48	In metal 114.5	49	Sn metal 118.5	50	Sb metal 121.7	51	Te nonmetal 127.4	52	I nonmetal 126.9	53	Xe nonmetal 131.3	54	Rn nonmetal 136.0	55	Fr metal 223.0	56	Ba metal 137.3	57	La* metal 138.9	58	Cs metal 132.9	59	Ce metal 140.1	60	Pr metal 141.0	61	Nd metal 141.2	62	Sm metal 141.9	63	Eu metal 151.9	64	Gd metal 157.3	65	Tb metal 158.9	66	Dy metal 162.5	67	Ho metal 164.9	68	Er metal 167.3	69	Tm metal 169.3	70	Yb metal 173.0	71	Lu metal 174.9	72	Unq (286)	73	Unq (286)	74	W metal 183.9	75	Re metal 186.2	76	Os metal 190.2	77	Ir metal 192.2	78	Pt metal 195.1	79	Au metal 197.0	80	Hg metal 200.5	81	Tl metal 205.4	82	Pb metal 207.2	83	Bi metal 208.5	84	Po metal 209.0	85	At metal 209.2	86	Rn nonmetal 212.0	87	Fr metal 223.0	88	Ra metal 226.0	89	Ac~ metal 227.0	90	Th metal 229.0	91	Pa metal 231.0	92	U metal 231.0	93	Np metal 237.0	94	Pu metal 239.0	95	Am metal 243.0	96	Cm metal 247.0	97	Bk metal 247.0	98	Cf metal 250.0	99	Es metal 253.0	100	Fm metal 254.0	101	Md metal 255.0	102	No metal 254.0	103	Lr metal 257.0	104	Unq (286)	105	Unq (286)	106	Hs metal 265.0	107	Bh metal 269.0	108	Db metal 269.0	109	Mt metal 270.0	110	Ds metal 270.0	111	Uuu metal 272.0	112	Uub metal 273.0	113	Uuh metal 273.0	114	Unq (286)	115	Unq (286)	116	Unq (286)	117	Unq (286)	118	Unq (286)	119	Unq (286)	120	Unq (286)
Lanthanide Series*																		Actinide Series-																		Actinide Series-																																																																																																																																																																																																											

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element names in **blue** are liquids at room temperature
element names in **red** are gases at room temperature
element names in black are solids at room temperature