2

L2-CHEMMR





Te Mātauranga Matū, Kaupae 2, 2015

9.30 i te ata Rāhina 23 Whiringa-ā-rangi 2015

PUKA RAUEMI mō 91164M, 91165M, 91166M

Tirohia tēnei puka hei whakatutuki i ngā tūmahi o tō Pukapuka Tuhinga, Tūmahi hoki.

Tirohia mēnā e tika ana te raupapatanga o ngā whārangi 2-3 kei roto i tēnei pukapuka, ka mutu, kāore tētahi o aua whārangi i te takoto kau.

KA TAEA TĒNEI PUKA TE PUPURI HEI TE MUTUNGA O TE WHAKAMĀTAUTAU.

TE TAKA PŪMOTU

18 He	4.0		Ne	20.2		Ar	40.0		Kr	83.8		Xe	131		Rn	222			
7		10			18			36			54			98					
;	17	6	-	19.0	17	こ	35.5	35	Br	79.9	53	Ι	127	85	At	210			
•	91	∞	0	16.0	16	S	32.1	34	Se	79.0	52	Те	128	84	Po	210	116	Lv	292
;	15	7	Z	14.0	15	Ь	31.0	33	As	74.9	51	Sb	122	83	Bi	209			
,	14	9	C	12.0	14	Si	28.1	32	Ge	72.6	50	\mathbf{Sn}	119	82	Pb	207	114	E	289
;	13	5	B	10.8	13	Al	27.0	31	Са	69.7	49	In	115	81	П	204			
							12	30	Zn	65.4	48	Cd	112	80	Hg	201	112	Cn	277
							II	29	Cu	94.5	47	\mathbf{Ag}	108	62	Au	197	1111	Rg	272
Vgota/							0I	28	Z	58.7	46	Pd	106	78	Pt	195	110	Ds	271
Papatipu Rāpoi Ngota/							6	72	C_0	58.9	45	Rh	103	<i>LL</i>	Ir	192	109	Mt	268
Papatip	g mol ⁻¹						8	26	Fe	55.9	44	Ru	101	9/	Os	190	108	Hs	265
1 H	1.0						7	25	Mn	54.9	43	Tc	6.86	75	Re	186	107	Bh	264
Tau Iraoho							9	24	Cr	52.0		M_0			*	184	106	S	263
Та							5	23	>	50.9	41	N	92.9	73	Га	181	105	Db	262
							4	22	Ţ	47.9	40	Zr	91.2	72	Ht	179	104	Rf	261
	_						3	21	Sc	45.0	39	Y	88.9	71	Lu	175	103	Lr	262
•	2	4	Be	9.0	12	Mg	24.3	20	Ca	40.1	38	\mathbf{Sr}	9.78	99	Ba	137	88	Ra	226
,	-	3	Ľ	6.9	111	Na	23.0	19	K	39.1	37	Rb	85.5	55	Cs	133	87	Fr	223

	57	58	59	09	61	62	63	64	65	99	29	89	69	70
Te Raupapa	La	Ce	Pr	Nd	Pm	Sm	Eu	Сd		Dy	H_0	Er	Tm	Vb
Lanthanide	139	140	141	144	147	150	152	157	159	163	165	167	169	173
	68	06	91	92	93	94	95	96	26	86		100	101	102
Te Raupapa	Ac	Th	Pa	Ω	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No
Actinide	227	232	231	238	237	239	241	244	249	251		257	258	259

PERIODIC TABLE OF THE ELEMENTS

<i>18</i> He 4.0	Ne	Ar	40.0		Kr	8.8		, se	31		Rn	222			
2 H 4	10 N	18		36	<u>×</u>		54	<u> </u>	131	98	~	2			
17	9 F	17 CI	35.5	35	Br	79.9	53	Ι	127	85	At	210			
16	8	16 S	32.1	34	Se	79.0	52	Te	128	84	P_0	210	116	Lv	292
15	7 N	15 P	31.0	33	As	74.9	51	$\mathbf{S}\mathbf{p}$	122	83	Bi	209			
14	6 C	14 Si	28.1	32	Ge	72.6	50	Sn	119	82	Pb	207	114	F	289
13	5 B	113 Al	27.0	31	Са	69.7	49	In	115	81	I	204			
· ·			12	30	Zn	65.4		Cd	112		Hg	201	112	Cn	277
			II	29	Cu	63.5	47	Ag	108	62	Au	197	111	Rg	272
1-1-			01	28	Z	58.7	46	Pd	106	78	Pt	195	110	Ds	271
Molar mass/g mol ⁻¹			6	27	Co	58.9	45	Rh	103	77	Ir	192	109	Mt	268
Molar m			8	26	Fe	55.9	44	Ru	101	92	Os	190	108	Hs	265
1 H 1.0			7	25	Mn	54.9		Tc	6.86	75	Re	186	107	Bh	264
number			9	24	Cr	52.0	42	M_0	95.9	74	*	184	106	S	263
Atomic number			5	23	>	50.9	41	NP	92.9	73	La	181	105	Db	262
			4	22	Li	47.9	40	Zr	91.2	72	Hf	179	104	Rf	261
			3	21	Sc	45.0	39	Λ	6.88	71	Lu	175	103	Lr	262
~	Be	7.0 112 Mg	24.3	20	Ca	40.1	38	Sr	9.78	99	Ba	137	88	Ra	226
7	3 Li		23.0	19	K	39.1	37	Rb	85.5	55	Cs	133	<i>L</i> 8	Fr	223

70	Tm Yb	169 173		D	
69	Er.	167		ш	
89	0		100		
29	H	165	66	Es	
99	Dy	163	86	Cf	751
65	Tb	159	62	Bk	249
64	Cd	157	96	Cm	244
63	Eu	152	95	Am	241
62	Sm	150	94	Pu	230
61	Pm	147	93	Np	737
09	Nd	144	92	n	238
59	Pr	141	91	Pa	23.1
58	Ce	140	06	$\mathbf{L}\mathbf{h}$	232
57	La	139	68	Ac	777
	Lanthanide	Series		Actinide	Series

English translation of the wording on the front cover

Level 2 Chemistry, 2015

9.30 a.m. Monday 23 November 2015

RESOURCE SHEET for 91164, 91165, 91166

Refer to this sheet to answer the questions in your Question and Answer Booklets.

Check that this booklet has pages 2–5 in the correct order and that none of these pages is blank.

YOU MAY KEEP THIS SHEET AT THE END OF THE EXAMINATION.