

See back cover for an English
translation of this cover

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90944MR



NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

Pūtaiao, Kaupae 1, 2013

90944 Te whakaatu māramatanga ki ngā āhuatanga o te waikawa me te pāpāhua¹

9.30 i te ata Rāhina 18 Whiringa-ā-rangi 2013
Whiwhinga: Whā

PUKAITI RAUEMI

Tirohia tēnei pukaiti hei whakautu i ngā pātai mō 90944.

Tirohia mehemea kei roto nei ngā whārangi 2–3 e raupapa tika ana, ā, kāore hoki he whārangi wātea.

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

¹ kawakore

Taka Katote
Table of Ions

+1	+2	+3	-3	-2	-1
NH_4^+	Ca^{2+}	Al^{3+}		O^{2-}	OH^-
Na^+	Mg^{2+}	Fe^{3+}		S^{2-}	Cl^-
K^+	Cu^{2+}			CO_3^{2-}	NO_3^-
Ag^+	Pb^{2+}			SO_4^{2-}	HCO_3^-
H^+	Fe^{2+}				F^-
	Ba^{2+}				
	Zn^{2+}				

TAKA PŪMOTU PERIODIC TABLE OF THE ELEMENTS

		Tau iraoho Atomic Number																		
		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18																		
3	4																	2		
Li	Be																	He		
11	12																	10		
Na	Mg																	Ne		
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36			
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr			
37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54			
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe			
55	56	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86			
Cs	Ba	Lu	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn			
87	88	103	104	105	106	107	108	109	110	111										
Fr	Ra	Lr	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg										

57	58	59	60	61	62	63	64	65	66	67	68	69	70
La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb
89	90	91	92	93	94	95	96	97	98	99	100	101	102
Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No

English translation of the wording on the front cover

Level 1 Science, 2013

90944 Demonstrate understanding of aspects of acids and bases

9.30 am Monday 18 November 2013
Credits: Four

RESOURCE BOOKLET

Refer to this booklet to answer the questions for 90944.

Check that this booklet has pages 2–3 in the correct order and that none of these pages is blank.

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