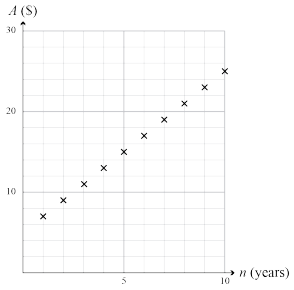
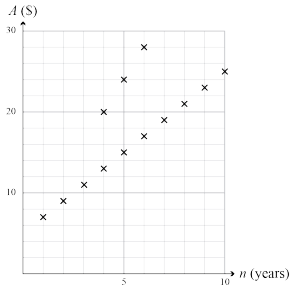
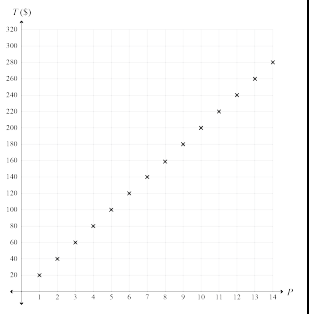
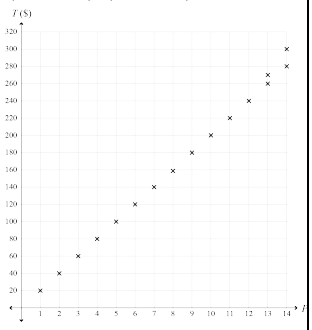
Assessment Schedule – 2013

Mathematics and Statistics: Investigate relationships between tables, equations and graphs (91028)

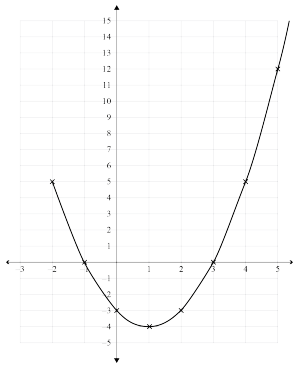
Evidence Statement

Qn	Evidence	Achievement	Achievement with Merit	Achievement with Excellence
ONE (a)(i)	$A = 2n + 5$	Equation correct. Accept other variables.		
(ii)	$A = 29$	Correct.		
(iii)	Graph of $A = 2n + 5$  	Correct. Accept with (0,5) included. Accept with (0,0) included.		
(iv)	From $n = 4$ graph increases.  	Points plotted correctly (4,20) (5,24) (6,28) with a line. Accept from (3,16). Accept step function.	Points plotted correctly (4,20) (5,4) (6,28) **without** a line. Accept from (3, 6). Accept correct step function.	
(v)	$4n + 4 = 44$ $n = 10$ OR $44 = 4n + 16$ to work out Arna's age.	Appropriate equation(s) established OR CAO = 10 years.	Appropriate equation(s) established AND Number of years found.	
(vi)	$T = n^2 + 6n$	Worked out 3 totals ie: 7, 16, 27, ...		Correct equation.
(b)	$y = ½\ x(x - 3)$ $y = ½\ x^2 - 1.5x$ Accept consistent equation using (1.5,–1) as the vertex using a correct method.	$y = x(x - 3)$		Correct equation.

NØ no response, no relevant evidence. N1 some evidence or 1 of u. N2 2 of u.	A3 3 of u. A4 4 of u.	M5 1 of r. M6 2 of r.	E7 1 of t. E8 2 of t.

Question	Evidence	Achievement	Achievement with Merit	Achievement with Excellence
TWO (a)(i)	Graph of $T = 20p$ 	Graph correct. Accept line or step function.		
(ii)	$T = 20P$	Correct equation.		
(iii) (iv)	Two points added to the graph. (13,270) (14,300)  2 weeks	Graph correct. OR Correct value.	Graph correct. AND Correct value.	
(v)	$T = 30P - 120$	Gradient or intercept correct.		Correct equation.
(b)(i)	3N + 6 4N + 6 4N + 12 N + 3 3	Accept unsimplified. Rest of 3rd column correct.		

(b)(ii)	The starting number is multiplied by 3 and another added, giving 4 times the start number. Dividing by 4 takes you back to the original number, which is then subtracted, leaving an answer of 0. AND The number added is 2, which when multiplied by 3 gives 6. Another 6 is added, giving 12, which when divided by 4, leaves an answer of 3.	ONE part partially described.	BOTH parts partially described. OR Used an algebraic **equation** to explain.	Full description given.
NØ no response, no relevant evidence. N1 some evidence. N2 1 of u.		A3 2 of u. A4 3 of u.	M5 1 of r. M6 2 of r.	E7 1 of t. E8 2 of t.

Question	Evidence	Achievement	Achievement with Merit	Achievement with Excellence
THREE (a)(i)	Graph drawn. 	2 sections correct. OR 4 points plotted correctly (0,2500) (15,2000) (2,2000) (35,0)	Graph correct.	
(ii)	$d = 2000$ $d = -100t + 3500$	Gradient or intercept correct.	ONE Equation correct.	BOTH equations correct.
(b)(i)	Graph drawn. 	Graph correct. Accept points only.		
(ii)	$y = x^2 - 2x - 3$ OR $y = (x + 1)(x - 3)$ OR $y = (x - 1)^2 - 4$		Correct equation.	
(iii)	$y = x^2 - 6x + 8$ $y = (x - 2)(x - 4)$ $y = (x - 3)^2 - 1$ $y = (x - 1)(x - 5) + 3$ The graph is moved 2 places to the right and up 3.	Translation partially described. OR Identifies a new intercept correctly.	Full description of: Changes to the graph. OR Identifies all new intercepts correctly. OR Equation correct.	Full description of: The translation of the graph. OR Identifies all new intercepts correctly. AND Equation correct..
NØ no response, no relevant evidence. N1 some evidence. N2 1 of u.		A3 2 of u. A4 3 of u.	M5 2 of r. M6 3 of r.	E7 1 of t. E8 2 of t.

Judgement Statement

	Not Achieved	Achievement	Achievement with Merit	Achievement with Excellence
Score range	0 – 8	9 – 13	14 – 18	19 – 24