

Q	Marking instructions	AO	Marks	Typical solution
5(a)	Forms a correct expression for the number of lengths swum on the n th day. ACF Can be unsimplified. For example: $10 + 4(n - 1)$	1.1b	B1	$4n + 6$
Subtotal			1	

Q	Marking instructions	AO	Marks	Typical solution
5(b)(i)	Forms the linear equation $25 \times$ their part(a) expression = 3000 OE Condone incorrect inequalities	3.1b	M1	$4n + 6 = \frac{3000}{25}$ $n = 28.5$ Ziad will need to train for 29 days
	Solves their linear equation and rounds or truncates to the nearest positive integer. Condone incorrect inequalities	3.2a	M1	
	Obtains 29 CAO	1.1b	A1	
Subtotal			3	

Q	Marking instructions	AO	Marks	Typical solution
5(b)(ii)	Uses a correct formula for the sum to n terms of an arithmetic progression substituting $a = 10$ and $d = 4$ or $l = 122$	3.4	M1	$\frac{29}{2}(2 \times 10 + (29 - 1) \times 4) \times 25 = 47850$ Swims 47850 metres $47850 < 50\ 000$ Therefore the coach is not correct
	Obtains either 47850 metres or 1914 lengths or AWRT 29.7 days. OE Condone missing units	3.2a	A1	
	Makes an appropriate comparison and concludes that the coach is wrong. The comparison must be explicit and can be one of the following: $47850 < 50\ 000$ $1914 < 2000$ $29.7 > 29$ or $30 > 29$ FT $n = 28$ only with one of the comparisons $44800 < 50\ 000$ $1792 < 2000$ $29.7 > 28$ or $30 > 28$ This latter case would be a maximum of M1 A0 R1F	2.4	R1F	
Subtotal			3	

	Question 5 Total		7	
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