Question Number	Scheme	Marks
1(a)	$\sum d^2 = 1+1+4+1+0+1+0+9+1[=18]$	M1
	$r_s = 1-\dfrac{6\times'18'}{9\left(9^2-1\right)} = 0.85$	M1A1
		(3)
(b)	$H_0 : \rho = 0 \qquad H_1 : \rho > 0$	B1
	Critical Value $r_s = 0.6$ or CR: $r_s \geqslant 0.6$	B1
	Reject H_0 or significant or does lie in the critical region	M1
	There is evidence to suggest that there is a **positive relationship** between the position in the 100 m freestyle and the position in the 200 m freestyle	A1
		(4)
(c)	The value of n will decrease	B1
	$\sum d^2$ would decrease/the difference in ranks for C and H would decrease [So SRCC will increase]	B1
		(2)

	Notes	**Total 9**
(a)	**M1**	for finding the difference between the position in the 100 m freestyle and the 200 m freestyle and evaluating $\sum d^2$. May be implied by 18. (Allow one error)
	M1	for using $1-\dfrac{6\sum d^2}{9\left(9^2-1\right)}$ with their $\sum d^2$
	A1	Cao **NB** 0.85 scores 3/3 (unless from obvious incorrect working)
(b)	**B1**	for both hypotheses correct. Must be in terms of ρ or ρ_s. Must be attached to H_0 and H_1 Condone use of p
	B1	for CV of 0.6
	M1	a correct statement ft part (a) and their CV – no context needed but do not allow contradicting non contextual statements. This may be implied by a correct contextual conclusion on its own. If part a not answered and/or no CV stated then M0
	A1	A correct contextual conclusion which is rejecting H_0. Allow there is **positive correlation** or a description of the relationship e.g. The higher the position in 100 m race the higher the position in the 200 m race oe
(c)	**B1**	For a correct comment about n decreasing e.g. $n\left(n^2-1\right)$ decreases **NB This is M1 on epen**
	B1	a correct explanation about what would happen to $\sum d^2$ or a comment about the difference in ranks for C and H **NB This is A1 on epen**