

Grouped Frequency Tables Mark Scheme

1	<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th style="padding: 5px;">Score, s</th> <th style="padding: 5px;">Frequency</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 5px;">$0 < s \leq 2000$</td> <td style="text-align: center; padding: 5px;">3</td> </tr> <tr> <td style="text-align: center; padding: 5px;">$2000 < s \leq 4000$</td> <td style="text-align: center; padding: 5px;">2</td> </tr> <tr> <td style="text-align: center; padding: 5px;">$4000 < s \leq 6000$</td> <td style="text-align: center; padding: 5px;">5</td> </tr> <tr> <td style="text-align: center; padding: 5px;">$6000 < s \leq 8000$</td> <td style="text-align: center; padding: 5px;">3</td> </tr> <tr> <td style="text-align: center; padding: 5px;">$8000 < s \leq 10\ 000$</td> <td style="text-align: center; padding: 5px;">6</td> </tr> </tbody> </table>	Score, s	Frequency	$0 < s \leq 2000$	3	$2000 < s \leq 4000$	2	$4000 < s \leq 6000$	5	$6000 < s \leq 8000$	3	$8000 < s \leq 10\ 000$	6	<p>[1] 3 correct value</p> <p>[1] 4 correct values</p> <p>[1] All correct</p>
	Score, s	Frequency												
	$0 < s \leq 2000$	3												
	$2000 < s \leq 4000$	2												
	$4000 < s \leq 6000$	5												
	$6000 < s \leq 8000$	3												
$8000 < s \leq 10\ 000$	6													
2(a)	$6248 + 4635 + 2751 = 13634$	[1]												
2(b)	<p>No, the information is not specific enough.</p> <p>No, it could be that all of the people in this category spent less than a minute, none of them did, or anything between.</p> <p>Can't tell where each person sits within the group or class as the data is grouped.</p>	[1] Must give one of the explanations provided.												
3	$27 + 42 = 69$	[1]												
	$84 - 69 = 15$	[1]												
4	<p>12 is presently the 2nd most common category and 11 is the third most common before the two were added.</p> <p style="text-align: center;">$10 < h \leq 20$</p>	[2] Explanation is not required for marks												
5(a)	$45 < t \leq 60$	[1] Median value is the 40 th value ($80 \div 2$)												
5(b)	$75 < t \leq 90$	[1] Modal group is the group with the highest frequency (22)												
6(a)	Because the groups are all similar in size	[1]												
6(b)	<p>The groups could be further split into 0.5 seconds groups. This would give a better view of how the students did in the race.</p>	[1]												

Turn over ►

7(a)	Score (%)	Frequency	[1] Correct group widths [1] Correct inequality signs [1] Correct frequency values
	$0 < x \leq 20$	10	
	$20 < x \leq 50$	16	
	$50 < x \leq 70$	26	
	$70 < x \leq 90$	12	
	$90 < x \leq 100$	6	
7(b)	Only need to calculate one mean	[1] Advantage	
	Can't compare classes	[1] Disadvantage	
8(a)	30	[1] (6 + 8 + 16)	
8(b)	$300 < s \leq 400$	[1]	
8(c)	$300 < s \leq 400$	[1]	

END