

Question	Scheme	Marks	AOs
1(a)	Label each year group	B1	1.1b
	Use <u>random</u> numbers to select a ...	B1	1.1b
	Simple random sample of <u>24 Year 12s</u> and <u>16 Year 13s</u> .	B1	1.1b
		(3)	
(b)	<u>Increase</u> by <u>2.8</u> marks	B1	3.4
		(1)	
(c)	e.g. ‘the best performance is predicted for the students who never wake up’	B1	3.5b
		(1)	
(5 marks)			
Notes			
(a)	B1: for a suitable numbered/labelled/ordered(o.e.) list/database/register(o.e.) for each year group. Condone poor numbering but if just one list, then the Year 12s must be distinguishable from the Year 13s		
	B1: for use of random numbers/sample/selection to choose students		
	B1: for <u>24 Year 12s</u> , and <u>16 Year 13s</u>		
Note:	A description of a systematic sample: only allow access to the first mark and therefore may score maximum B1B0B0		
(b)	B1: Using the gradient of the regression equation must include <u>increase</u> (o.e.) and <u>2.8</u> ‘Increase by approximately 3 marks’ is B0 but isw if 2.8 is seen $5.6 \div 2$ is not sufficient		
(c)	B1: for any suitable limitation of the model e.g. the idea that the longer you sleep the better performance in the test or only valid between 0 and 24 hours (within range of the data) or only applicable to the amount of sleep the night before the test or only takes sleep into consideration/does not include other variables (factors) or cannot score below 26.1 marks on the test or the model might not be linear over the entire range or the model might predict more than the maximum mark B0: e.g. might not be correlation between s and p or individual student performance may vary		