

Question		Answer	Marks	AO	Guidance
10	(a)	29.3 > 10 oe so birth rates on average higher in Africa than in Europe	B1	2.4	Must refer to means e.g ‘averages’ is B0 so ‘ <u>mean</u> of Africa > <u>mean</u> of Europe so birth rates (on average) higher (or ‘in general birth rate is higher) in Africa’ etc than in Europe’ is B1 The comparison can be indirect/implicit- e.g. mean of Africa > mean of Europe so... Average of Africa > average of Europe so birth rates on average higher in Africa than in Europe’ is B0 Accept reverse statements with 10 < 29.3
		8.43 > 1.94 so birth rates more variable (larger dispersion) in Africa than in Europe Condone ‘more distributed’ or ‘more spread out’ BOD for ‘more variable’	B1	2.4	Must refer to SDs as they must use the given information. Accept reverse statements with 1.94 < 8.43 In both parts, must refer to specific statistical data given-means/SDs - no general comments without reference to values. The references can be implicit (mean of Africa > mean of Europe) so... etc
			[2]		
10	(b)	'29.3 – 2 × 8.43' (= 12.44)	M1	1.1	Calculation of $\mu - 2\sigma$ only. Ignore attempts at upper bound. '12.44' not needed for this mark.
		9.86 < 12.44 so 9.86 is outlier oe	A1	2.3	May see e.g. so 9.86 is more than 2 standard deviations away from the mean. Must give a concluding statement ‘so it’s an outlier etc’ and must also compare 9.86 with correct value , so an error with the calculation loses this mark. The comparison can be indirect e.g. 9.86 outside acceptable range etc.
			[2]		

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10	(c)	It should not be discarded as it's genuine data	B1	2.4	Must have 'No/should not' and reason: 'No as Mauritius does has a very low birth rate' is B1. 'The data for Mauritius is accurate data' o.e. is B1 'No as there are some countries in the LDS with very low birth rates' is B1.
			[1]		
10	(d)	Not all of the data was available	B1	2.2a	'No data for the other countries' – BOD B1 Any reference to countries being small or 'data <u>may not</u> be available' is B0- needs to convey the fact that it wasn't in the LDS
			[1]		