10	**(i)**		[μ =]19	**B1** **[1]**	**1.1**		

Question			Answer	Marks	AOs	Guidance	
10	(ii)		$1.96 = \frac{21.548 - 19}{\sigma}$ $[\sigma =]$ awrt 1.3 $[\sigma^2 =]$ awrt 1.69	**M1** **A1** **A1** **[3]**	**3.1a** **1.1** **1.1**	or $-1.96 = \frac{16.452 - 19}{\sigma}$ may be implied by final answer allow **B3** for awrt 1.69 unsupported	NB 1.959963985…rounded to 3 or more sf **M0** if $z = 2$
10	(iii)	***A***	$[\mu =]$ 4 × *their* 19 + 5 $[\sigma^2 =] 4^2$ × *their* 1.69 or $\sigma = 4\times$ *their* 1.3 $[Y \sim] \mathrm{N}(81, 5.2^2)$ oe	**M1** **M1** **A1** **[3]**	**2.1** **1.1** **1.1**	NB 27.04	
10	(iii)	***B***	0.04175 or 0.0417 or 0.042 BC	**B1** **[1]**	**1.1**		NB 0.0417462427103