Question Number	Scheme	Marks
3 (a)	$\left[\frac{26.624+28.976}{2}\right]=27.8$	B1
		(1)
(b)	$28.976-26.624=2\times1.96\times\frac{\sigma}{\sqrt{25}}$ or $26.624='27.8'-1.96\times\frac{\sigma}{\sqrt{25}}$ or $28.976='27.8'+1.96\times\frac{\sigma}{\sqrt{25}}$	M1 B1
	$\sigma=3$*	A1* cso
		(3)
(c)	$2\times z\times\frac{3}{\sqrt{25}}=2.1$ So $z=1.75$	M1 A1
	$\text{P}(Z>'1.75')=\text{P}(Z<-'1.75')=1-'0.9599'='0.0401'$	M1 A1ft
	Confidence level = $100\times(1-2\times'0.0401')=91.98\%$	M1 A1
		(6)
(d)	$2\times1.96\times\frac{3}{\sqrt{n}}<1.5$	M1
	$\sqrt{n}>\frac{6\times1.96}{1.5}$	dM1
	$\sqrt{n}>$ awrt 7.84 So $n=62$	A1 A1
		(4)
	Notes	**Total 14**

(a)	**B1**	for 27.8
(b)	**M1**	for $28.976-26.624=2\times z$ value $\times\frac{\sigma}{\sqrt{25}}$ or $26.624='27.8'-z$ value $\times\frac{\sigma}{\sqrt{25}}$ or $28.976='27.8'-z$ value $\times\frac{\sigma}{\sqrt{25}}$ where $1.5 < z < 2.4$
	B1	awrt 1.96
	A1* cso	answer is given so no incorrect working must be seen
(c)	**M1**	for $2\times z\times\frac{3}{\sqrt{25}}=2.1$
	A1	for $z=1.75$
	M1	for $1-p$, where p is a probability
	A1ft	for 0.0401 or ft their z value (Allow 0.04)
	M1	for $100\times(1-2\times0.0401)$ ft their $\text{P}(Z<-1.75)$
	A1	awrt 92.0 (allow 92)
(d)	**M1**	for $2\times z$ value $\times\frac{3}{\sqrt{n}}<1.5$ oe z value must either be correct or consistent with part (b) Allow $\leqslant$ or = Condone > or $\geqslant$
	dM1	Dependent on previous M mark. Correct rearrangement to get $\sqrt{n}>...$ or $n>\ldots$ oe Allow $\geqslant$ or = Condone < or $\leqslant$
	A1	awrt 7.84 may be implied by awrt 61.5
	A1	for $n=62$