

1	(a)		2	M1	for start to express the common ratio algebraically, eg $1/(\sqrt{x} - 1)$ or $(\sqrt{x} + 1)/1$ or $\sqrt{x} + 1 = k \times 1$ or $1 = k \times (\sqrt{x} - 1)$
				M1	for setting up an appropriate equation in $x$ , eg $1/(\sqrt{x} - 1) = (\sqrt{x} + 1)/1$
	(b)		Shown	C1	for convincing argument to show $x = 2$
				M1	for expressing the relationship between the common ratio, one of the first three terms of the sequence and the fifth term, eg 5 <sup>th</sup> term = 3 <sup>rd</sup> term $\times$ (common ratio) <sup>2</sup>
				C1	for a complete explanation to include eg, $(\sqrt{2} + 1)(\sqrt{2} + 1)^2 = 7 + 5\sqrt{2}$

2	0.95	P1	for initial use of the formula eg $3610 = kP_n$ or $P_{n+1} = 4000k$ or for $P_{n+2} = k^2P_n$ or for $3610 = k^2 \times 4000$	Accept $n$ or any integer replacement for $n$  This may be seen in steps
		P1	for a complete method to find $k$ eg $\sqrt{\frac{3610}{4000}}$ or $\pm 0.95$	
		A1	oe	