Question	Answer	Marks	AO	Guidance	
3	$2+2d=2r$	B1	1.1	Or for $a+2d=ar$	
	$2+12d=2r^2$	B1	1.1	Or for $a+12d=ar^2$	
	$1+6d=(1+d)^2$ or $2+12d=2(1+d)^2$	M1*	1.1	Setting up an equation in d or r only – dependent on one **B** mark	$2+12(r-1)=2r^2$
	$d^2-4d=0\Rightarrow d=...$	M1dep*	1.1	Solving their two-term quadratic equation in d (or three-term quadratic in r)	$r^2-6r+5=0$ $(r-5)(r-1)=0$ $\Rightarrow r=...$
	$d=4$ and as the common difference is positive the progression is an increasing sequence	A1	2.4	Correct value for d and link to increasing sequence – must either say that d is positive (oe) or state at least the correct first four terms and comment that they are increasing	Condone no mention of $d\neq 0$
		[5]			
	Alternative method				
	$\left(\frac{u_3}{u_2}=\right)\frac{2+12d}{2+2d}$	B1		or for $\frac{u_3}{u_1}$	
	$\left(\frac{u_2}{u_1}=\right)\frac{2+2d}{2}$	B1			
	$\frac{2+12d}{2+2d}=\frac{2+2d}{2}$	M1*		Setting up an equation in d only – dependent on one **B** mark	
	$d^2-4d=0\Rightarrow d=...$	M1dep*		Solving their two-term quadratic equation in d	
	$d=4$ and as the common difference is positive the progression is an increasing sequence	A1		As above	