

Question number	Scheme	Marks
1 (i)/(ii)	$ar^2 = a + 9d = 48$ or $a + 9d = 4ar$  $\frac{4ar}{ar^2} = 1$  $\frac{4}{r} = 1$  $r = 4 \quad a = 3 \quad d = 5$  <b>Alternative method</b> $a_1 + 9d = t_1 r^2$ or $a_1 + 9d = 4t_1 r$  $r^2 = 4r$  $r = 4$  $t_1 r = 12$ So $t_1 = a_1 = 3$ $a_1 r + 9dr = 48r \Leftrightarrow 12 + 36d = 192 \Leftrightarrow 36d = 180$ $d = 5$	B1  M1  M1  A1 A1 A1 <b>[6]</b>  B1  M1  A1 A1 M1 A1  <b>[6]</b>
<b>Notes</b>		
<b>B1</b>	For either $ar^2 = a + 9d = 48$ or $a + 9d = 4ar$ oe	
<b>M1</b>	For solving simultaneously	
<b>M1</b>	For simplifying to $\frac{4}{r} = 1$ oe	
<b>A1</b>	$r = 4$	
<b>A1</b>	$a = 3$	
<b>A1</b>	$d = 5$	
<b>Alternative</b>		
<b>B1</b>	For either $a_1 + 9d = t_1 r^2$ or $a_1 + 9d = 4t_1 r$ oe	
<b>M1</b>	For solving simultaneously	
<b>A1</b>	$r = 4$	
<b>A1</b>	$a = 3$	
<b>M1</b>	For $a_1 r + 9dr = 48r \Leftrightarrow 12 + 36d = 192 \Leftrightarrow 36d = 180$	
<b>A1</b>	$d = 5$	