Question	Scheme	Marks	AOs
10	Attempts $S_\infty = \dfrac{8}{7} \times S_6 \Rightarrow \dfrac{a}{1-r} = \dfrac{8}{7} \times \dfrac{a(1-r^6)}{1-r}$	M1	2.1
	$\Rightarrow 1 = \dfrac{8}{7} \times (1 - r^6)$	M1	2.1
	$\Rightarrow r^6 = \dfrac{1}{8} \Rightarrow r = ..$	M1	1.1b
	$\Rightarrow r = \pm\dfrac{1}{\sqrt{2}}$ (so $k = 2$)	A1	1.1b

(4 marks)

Notes:

M1: Substitutes the correct formulae for S_∞ and S_6 into the given equation $S_\infty = \dfrac{8}{7} \times S_6$

M1: Proceeds to an equation just in r

M1: Solves using a correct method

A1: Proceeds to $r = \pm\dfrac{1}{\sqrt{2}}$ giving $k = 2$