Question	Scheme	Marks
2	$n=1 \Rightarrow a = 8^{(1-2)} = 8^{-1}$ oe eg $\frac{1}{8}$	B1
	$n=2 \Rightarrow ar = 8^{(1-4)} = 8^{-3} \Rightarrow r = \frac{8^{-3}}{8^{-1}} = 8^{-2}$ oe eg $\frac{1}{64}$	M1A1
	$(S_\infty =)\frac{8^{-1}}{1-8^{-2}} = \frac{2^{-3}}{\frac{63}{2^6}} = \frac{8}{63}$ oe eg $\frac{\frac{1}{8}}{1-\frac{1}{64}}\left(=\frac{\frac{1}{8}}{\frac{63}{64}} = \frac{1}{8}\times\frac{64}{63}\right)$	M1dM1
	$\frac{8}{63}$ oe or $p=8,\ q=63$ oe	A1
		Total 6 marks

Mark	Notes
B1	For $a = 8^{-1}$ oe
M1	For substituting $n = 2$ into the expression for nth term to find a value for ar **and** dividing by a to find r. This mark can be implied by a correct value for r.
A1	For $r = 8^{-2}$ oe
M1	For applying the correct formula for the sum to infinity of a convergent geometric series for their values of a and r, providing $\lvert r \rvert < 1$ They must be using values they've attained or stated for a and r.
dM1	For a correct attempt to use an index law with their expression to obtain the required form or a correct attempt to divide their fractions. Dependent on previous method mark.
A1	For the correct answer in the required form any equivalent with p and q integers is acceptable.

In this question, the final dM1 may implied from a correct substitution of their values of r and a, evaluated correctly, if working isn't shown.
You may have to check their final answer.

Eg

$r = \frac{1}{4}, a = \frac{1}{8}$

$(S_\infty =)\frac{\frac{1}{8}}{1-\frac{1}{4}} = \frac{1}{6}$ is M1 dM1 A0 because the $\frac{1}{6}$ is correct for their a and their r