Question Number	Scheme	Marks
3 (a)	$\dfrac{(5x+3)}{(11x-3)}=\dfrac{(3x-3)}{(5x+3)}$ or $(5x+3)^2=(3x-3)(11x-3)$	M1A1
	$25x^2+30x+9=33x^2-42x+9$	
	$8x^2-72x(=0)$ $x=0,\ x=9$	dM1A1 (4)
	Spec case: Give M1A0M0A0 (ie B1) if $x = 0$ seen w/o working	
(b)	$x=0$ $r=\dfrac{3}{-3}=-1$	B1
	$x=9$ $r=\dfrac{48}{96}=\dfrac{1}{2}$	M1A1cso (3)
(c)	$x=9$ $a=96$	
	$S_\infty=\dfrac{96}{1-\frac{1}{2}},=192$	M1Aft, A1cao (3)
		[10]

(a)M1	Form an equation connecting the three given terms, must either be equating fractions or multiplying in pairs.
A1	Correct equation, fractions can be either way up
dM1	Solve the resulting quadratic to x = ...
A1	**Both c**orrect values of x obtained
(b)	
B1	$r=-1$ seen
M1	Use a non-zero value of x obtained in (a) and obtain the corresponding of r. Must use the same value of x in both substitutions.
A1cso	$r=\dfrac{1}{2}$
(c)M1	Use the formula for the sum to infinity of a convergent geometric series with $\lvert r\rvert<1$ and a value of a found using the corresponding value of x.
	Acceptable formulae $S_\infty=\dfrac{a}{1-r},=\dfrac{a(1-r^\infty)}{1-r},=\dfrac{a(r^\infty-1)}{r-1}$
A1ft	"Correct" numbers in the formula, ft their x and r **and** $r^\infty = 0$
A1cao	192