

Q	Marking instructions	AO	Marks	Typical solution
7(a)	Multiplies both the numerator and denominator of at least one of the given fractions by an appropriate conjugate. Or Obtains a common denominator with numerators which simplify to $35\sqrt{n} - 21 - (21 + 35\sqrt{n})$ or a single fraction with numerator $35\sqrt{n} - 21 - (21 + 35\sqrt{n})$	1.1a	M1	$\frac{7}{3+5\sqrt{n}} - \frac{7}{5\sqrt{n}-3}$ $= \frac{7(5\sqrt{n}-3)}{(3+5\sqrt{n})(5\sqrt{n}-3)} - \frac{7(3+5\sqrt{n})}{(3+5\sqrt{n})(5\sqrt{n}-3)}$ $= \frac{35\sqrt{n}-21-(21+35\sqrt{n})}{(3+5\sqrt{n})(5\sqrt{n}-3)}$ $= -\frac{42}{25n-9}$
	Obtains a correct single unsimplified fraction.	1.1b	A1	
	Obtains correct simplified fraction $-\frac{42}{25n-9}$ OE	2.1	A1	
Subtotal			3	

Q	Marking instructions	AO	Marks	Typical solution
7(b)	Explains that the numerator and denominator are both integers, or rational, and concludes it is rational	2.4	E1F	Since 42 and $25n-9$ are both integers the expression is rational
Subtotal			1	

Question 7 Total			4	
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