17 The table gives information about the first six terms of a sequence of numbers.

Term number	1	2	3	4	5	6
Term of sequence	$\frac{1\times 2}{2}$	$\frac{2\times 3}{2}$	$\frac{3\times 4}{2}$	$\frac{4\times 5}{2}$	$\frac{5\times 6}{2}$	$\frac{6\times 7}{2}$

Prove algebraically that the sum of any two consecutive terms of this sequence is always a square number.

(Total for Question 17 is 4 marks)

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