A METHOD FOR PROVING INEQUALITIES WITH AND WITHOUT INDUCTION

Abstract. This paper gives a new unitary technique for proving inequalities of the form

$$\frac{1}{an+1} + \frac{1}{an+2} + \ldots + \frac{1}{bn} > c,$$

where $a, b \in \mathbb{N}^*$, $b > a$, and $c \in \mathbb{R}$.

This method can be directly applied or inserted in the induction process, in order to obtain a simple solution.

Finally, a way to obtain as much new inequalities of this type as we want is also illustrated.

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