The sum of the series $\sum_{n=8}^{17} 1/(n+2)(n+3)$ is equal to

1. 1/17
2. 1/18
3. 1/19
4. 1/20

Solution:

$S = \sum_{n=8}^{17} 1/(n+2)(n+3)$

$= \sum_{n=8}^{17} 1/(n+2) - 1/(n+3)$

$= ((1/10)-(1/11)+(1/11)-(1/12)+...+(1/19)-(1/20))$

$= (1/10)-(1/20)$

$= 1/20$

Hence option (4) is the answer.