

$\frac{1}{1 \times 2} - \frac{1}{2 \times 3} + \frac{1}{3 \times 4} - \frac{1}{4 \times 5}$ を計算しなさい。

[筑波大附属中]

$$\begin{aligned}
 & \left(\frac{1}{1} - \frac{1}{2}\right) - \left(\frac{1}{2} - \frac{1}{3}\right) + \left(\frac{1}{3} - \frac{1}{4}\right) - \left(\frac{1}{4} - \frac{1}{5}\right) \\
 &= \cancel{1} - \cancel{\frac{1}{2}} - \cancel{\frac{1}{2}} + \frac{1}{3} + \frac{1}{3} - \frac{1}{4} - \frac{1}{4} + \frac{1}{5} \\
 &= \frac{2}{3} - \frac{1}{2} + \frac{1}{5} \\
 &= \frac{20}{30} - \frac{15}{30} + \frac{6}{30} \\
 &= \frac{11}{30}
 \end{aligned}$$