

$$\begin{aligned}
\lim_{x \rightarrow +\infty} \frac{a\sqrt{2x^2+3}+2017}{2x+2018} &= \lim_{x \rightarrow +\infty} \frac{a\sqrt{x^2(2+\frac{3}{x^2})}+2017}{2x+2018} \\
&= \lim_{x \rightarrow +\infty} \frac{ax(\sqrt{2+\frac{3}{x^2}+\frac{2017}{x}})}{x(2+\frac{2018}{x})} \\
&= \frac{a\sqrt{2}}{2}
\end{aligned}$$

$$\text{Mà } \lim_{x \rightarrow +\infty} \frac{a\sqrt{2x^2+3}+2017}{2x+2018} = \frac{1}{2} \Rightarrow \frac{a\sqrt{2}}{2} = \frac{1}{2} \Rightarrow a = \frac{\sqrt{2}}{2}$$