

6.21

$$\begin{aligned}\lim_{x \rightarrow 0} \frac{2x^2 - \eta\mu^2 x}{x^2 \eta\mu^2 x} &= \lim_{x \rightarrow 0} \frac{2x^2 - \eta\mu^2 x}{x^2} \cdot \lim_{x \rightarrow 0} \frac{1}{\eta\mu^2 x} = \lim_{x \rightarrow 0} \left(\frac{2\cancel{x^2}}{\cancel{x^2}} - \frac{\eta\mu^2 x}{x^2} \right) \cdot \lim_{x \rightarrow 0} \frac{1}{\eta\mu^2 x} = \\ &= (2 - 1)(+\infty) = \boxed{+\infty}\end{aligned}$$