Let \( f(x) = \frac{3x^3 - 2x}{2x^3 + 1/x^2} \).

Factor out large terms at large \( x \):

\[
f(x) = \frac{3x^3}{2x^3} \frac{(1 - \frac{2}{3x})}{1 + \frac{1}{2x^5}}
\]

\[
= \frac{3}{2} x \left(1 + O(x)^5\right)
\]

\[
\to \frac{3}{2} \quad \text{as} \quad x \to \infty.
\]

Factor out large terms as \( x \to 0 \):

\[
f(x) = \frac{-2/5x^2}{1/x^2} \frac{1 - 3x^{5/2}}{1 + 2x^5}
\]

\[
= -2 \times (1 + O(x)^5)
\]

\[
\to -2 \quad \text{as} \quad x \to 0.
\]