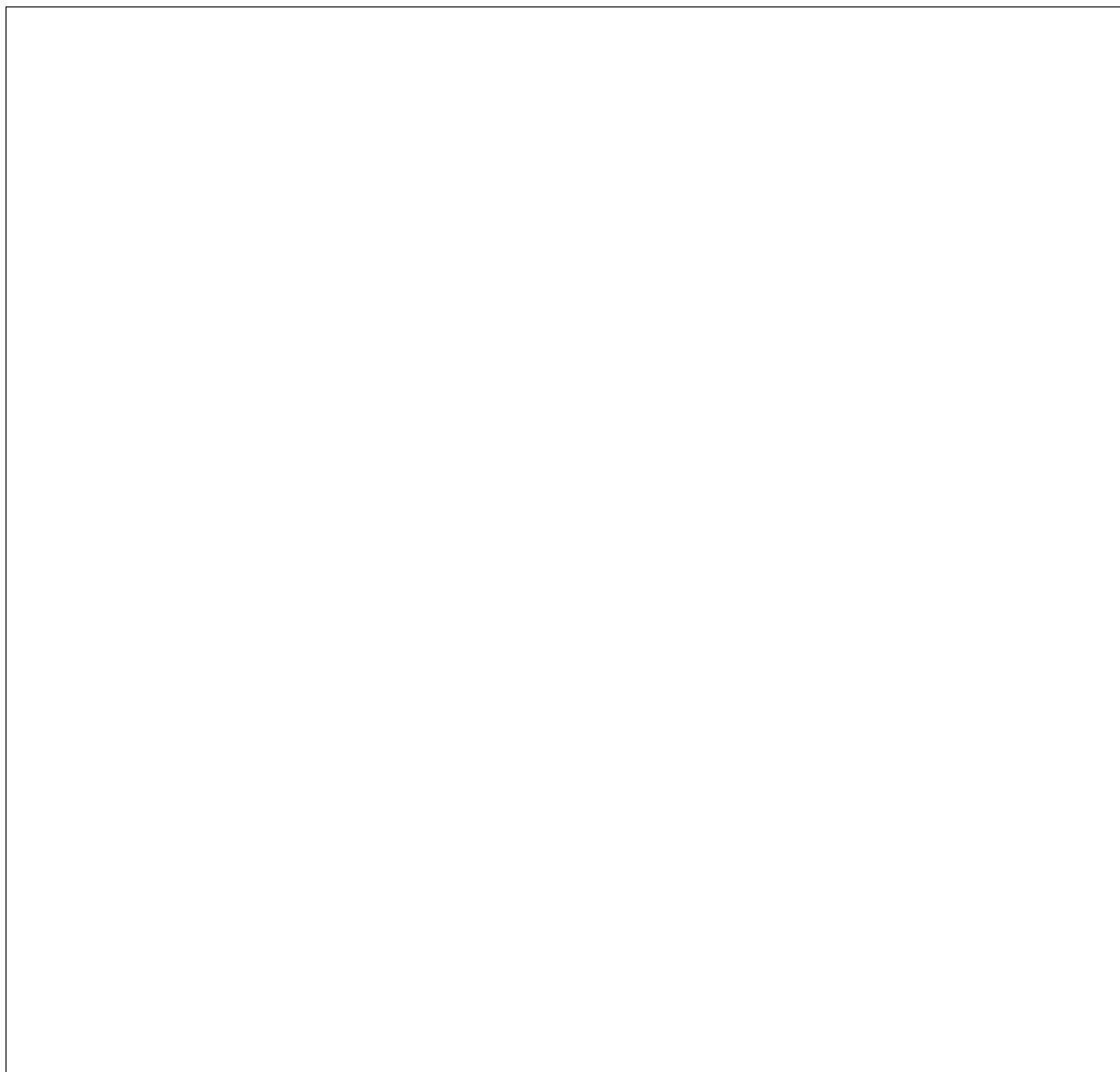


QUESTION 2.

Use the definition of the derivative to show that for any $x > 0$

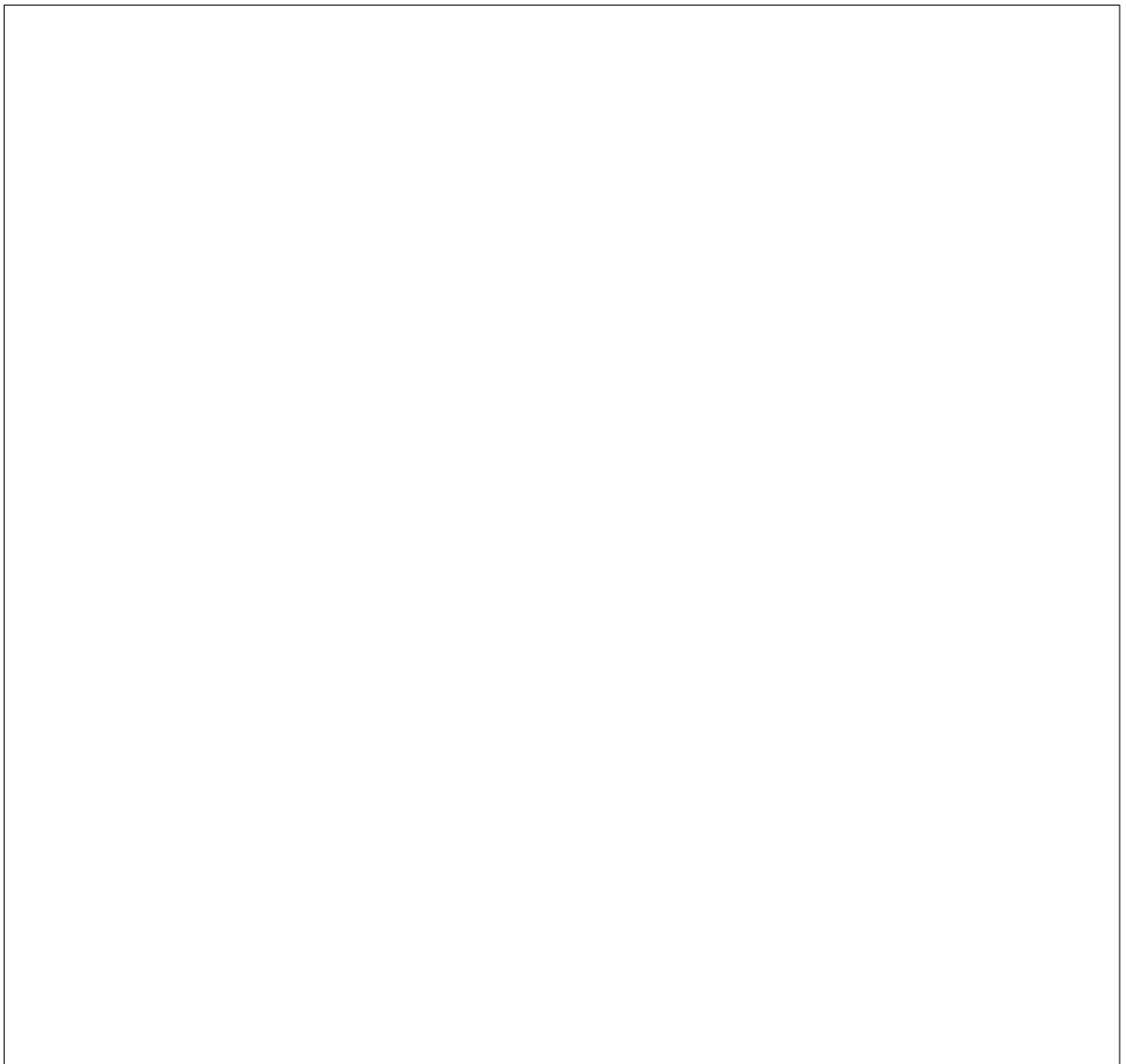
$$\frac{d}{dx}\sqrt{3x} = \frac{3}{2\sqrt{3x}}.$$



QUESTION 3.

Consider the function $f(x) = \frac{(3x^2 + 5)}{(x + 1)}$.

- a) Determine the domain of f .
- b) Compute $f'(x)$.
- c) Find the critical points of f .



QUESTION 4.

Find the equation of the tangent to the curve $f(x) = 3x^4 - 8x^3 - 6$ at the point $(2, f(2))$.

