Practice Quiz 6 (L14-L16)

1. What is the linearization of $f(x) = \sqrt{x}$?

    (i) Use linearization to approximate $\sqrt{82}$.

2. What are the critical points of $f(x) = \ln(x^2 - 2x)$?

3. Suppose $f'(x) = \frac{x-3}{x+1}$. Find and classify the critical points of f as local max, local min, or neither.

4. Find the absolute max and absolute min of $f(x) = \sin^{-1}(\cos(3x))$ on the interval $[0, \frac{\pi}{2}]$.