Let $f(x) = x^2 - 2x$

1. Use the definition of the derivative to find $f'(3)$

2. Write the equation of the line tangent to the graph $y = f(x)$ at $x = 3$

3. Use the definition of the derivative to find an expression for $f'(x)$

   Verify your answer by graphing $f(x)$ and $f'(x)$ on the same set of axes