

SECTION 3-2: THE DERIVATIVE AS A FUNCTION

1. Write the definition of $f'(x)$, the derivative of the function $f(x)$,

2. Let $f(x) = \sqrt{x+5}$.

(a) Use the definition of the derivative to find $f'(x)$.

(b) Sketch $f(x)$ and $f'(x)$ on the same set of axes. (Use technology if you like.)

(c) Write the equation of the line tangent to $f(x)$ at $x = 0$.

3. On the next page are several graphs. For each one, sketch the graph of $f'(x)$ on the axes below.

