Graph the following function and determine the domain and range.

\[ f(x) = \sqrt{2x + 1} \]

2x + 1 ≥ 0
x ≥ −\(\frac{1}{2}\)

(−\(\frac{1}{2}\), 0)

\[ f(0) = \sqrt{2(0) + 1} = 1 \]
\[ f(4) = \sqrt{2(4) + 1} = \sqrt{9} = 3 \]

Domain: [−\(\frac{1}{2}\), \(\infty\))
Range: [0, \(\infty\))