The area of a rectangle is 35 square inches. The length is 3 inches more than twice the width. Determine the length and the width. Be sure to define appropriate variables, create equations, and then solve for the variables. Summarize your results in a complete sentence.
Let L = length in inches
Let W = width in inches

\[ L \cdot W = 35 \]
\[ L = 2W + 3 \]  
Substitute the second equation into the first equation.

\[(2W + 3)W = 35\]
\[2W^2 + 3W = 35\]
\[-35 -35\]
\[2W^2 + 3W - 35 = 0\]
\[(2W - 7)(W + 5) = 0\]
\[2W - 7 = 0 \text{ or } W + 5 = 0\]
\[2W = 7 \text{ or } W = -5\]
\[W = 3.5\]

Impossible for width to be negative, so we discard this value.

This is the width - - 3.5 inches.

\[ L = 2W + 3 = 2 \cdot 3.5 + 3 = 7 + 3 = 10 \text{ inches}.\]

Summary: The length of the rectangle is 10 inches and the width is 3.5 inches.