Consider the region bounded between the curves \( y = \sqrt{x + 2} \) and \( y = x \). The area is split into thin horizontal rectangles of height \( dy \) and width \( w \). A typical slice is located at the variable position \( y \) as shown in the figure.

1. Identify and label the width and height of the typical slice in the above figure.

2. Find the area of a typical rectangle. Write your answer as “\( dA = \text{formula} \)”. Your formula will involve both \( y \) and \( dy \).

3. Answer the first three parts of the WebAssign Problem.

4. Set up the definite integral that sums up all the thin rectangles to find the area of this region.