14.1, number 5: **Find and sketch the domain of** $f(x, y) = \sqrt{y - x - 2}$.

Answer: The domain of f is the set of points (x, y) in the xy-plane with $0 \leq y - x - 2$.

Draw $x + 2 = y$ in the xy-plane.

The domain of f is the set of points on or above the line $x + 2 = y$ in the xy-plane.

There is a picture on the next page.

Picture 14.1 Number 5

The domain of $f(x,y) = \sqrt{y-x-2}$ is the set of points in the xy-plane on or above the line $y = x+2$.