

## Problem 1

Find the area bounded by the two functions  $y = x^2 + 1$  and  $y = 2$ .

## Problem 2

Find the area between  $y = \sin(x)$  and  $y = \cos(x)$  on the interval  $[0, \pi]$

## Problem 3

Let  $y = \sqrt{x+1} + 2$ ,  $y = 3 - x$ ,  $y = 0$  and  $x = -1$ . Find the area of the region bounded by these functions by **integrating with respect to  $y$** .