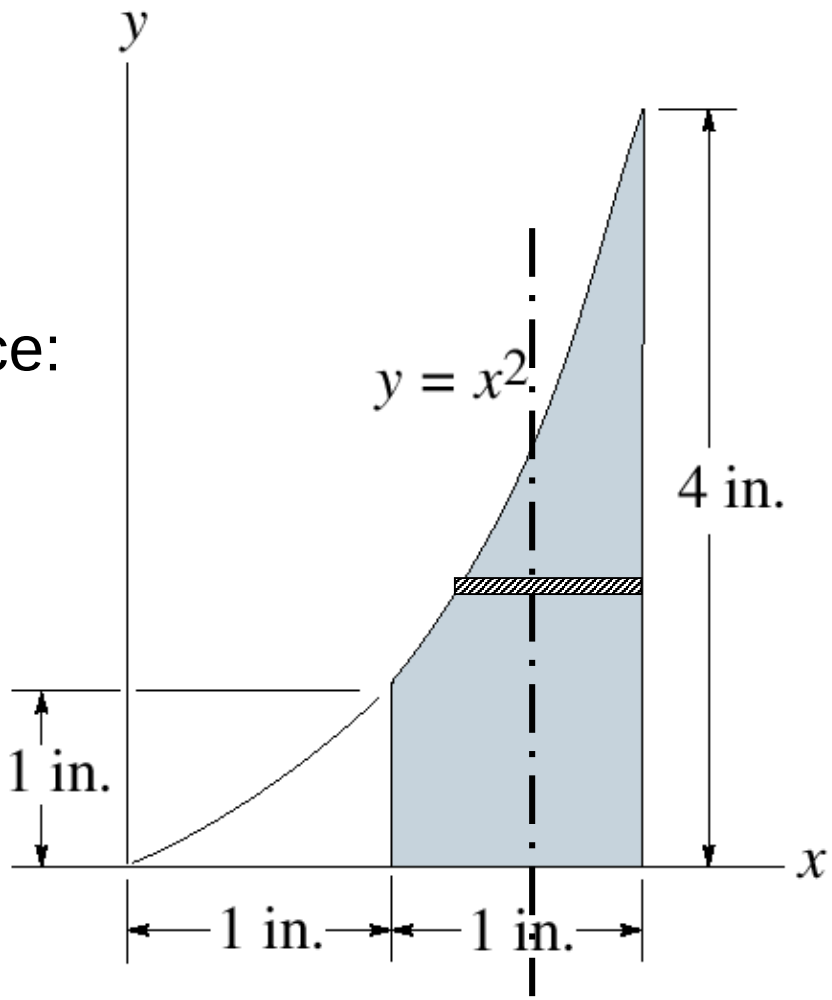
Example #1: Locate the centroid $\bar{x}$ of the shaded area using a horizontal slice.

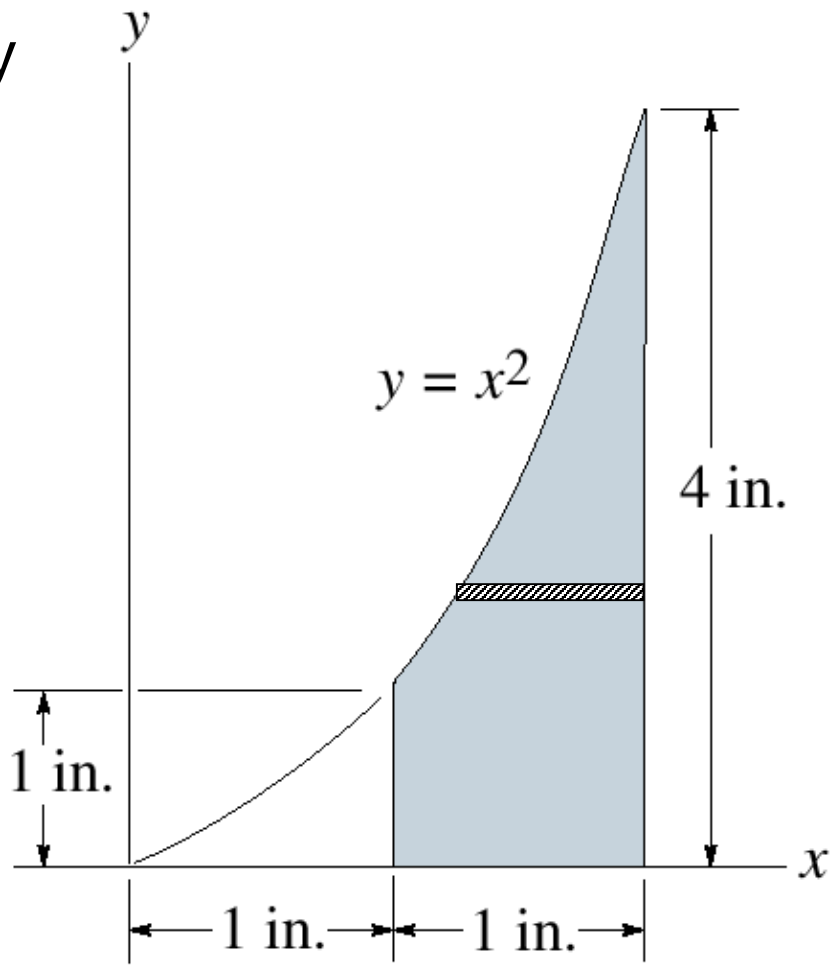
We will see that the process is more complex, but it yields the same answer as if we worked this problem using a vertical slice:

$\bar{x}$ = 1.61”



If we take a horizontal segment:

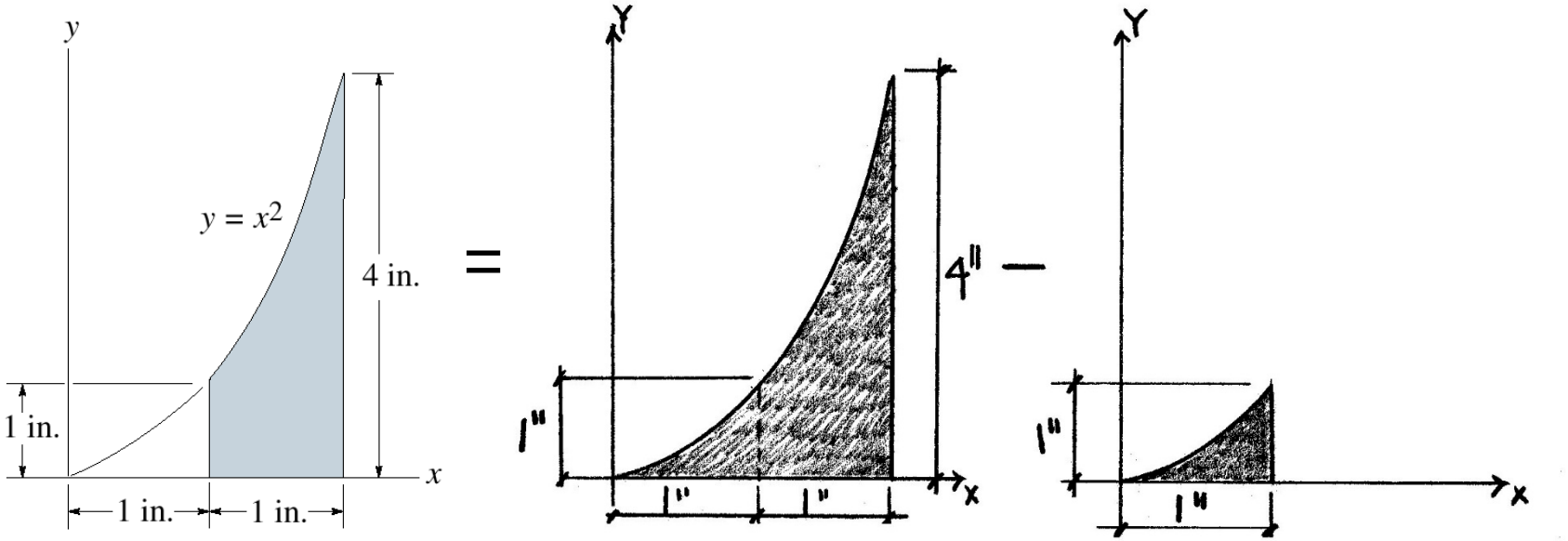
- We have an issue in the way we approach the problem.
- With a horizontal segment, we must integrate vertically, but the eqn **$y = x^2$** is only valid from y = 1 to y = 4.
- Thus, we must look at alternate method to solve …



Alternate Method:

Sometimes, *Subtraction of Areas* is used in the solution …

For the previous problem we would use the following:



Let's look at solving the problem using this method …