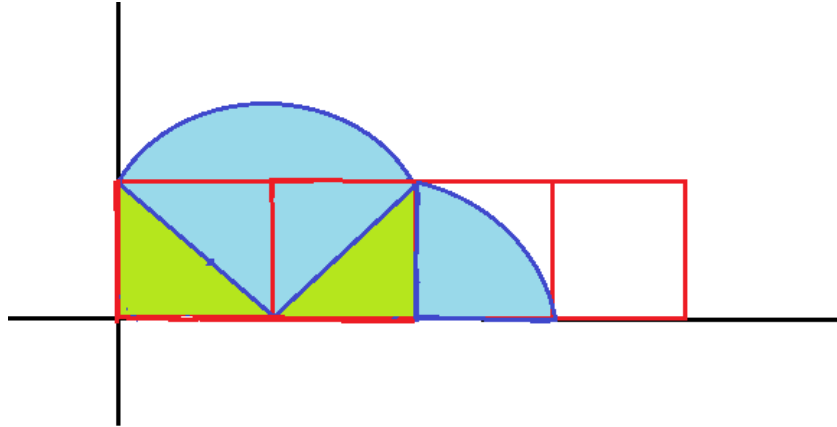


SOLUTION OF NOVEMBER PROBLEM



When we rotate the square around $(1, 0)$ our point generates the arc from $(0, 1)$ to $(2, 1)$. When we rotate the square around $(2, 0)$ our point generates the arc from $(2, 1)$ to $(3, 0)$. When we rotate the square around $(3, 0)$ our point remains fixed. So area between the curve generated by the point and x -axis is the blue quarter discs of radii 1 and $\sqrt{2}$, and the green triangles. So area we look for is

$$\frac{\pi}{2} + \frac{\pi}{4} + 1 = \frac{3\pi}{4} + 1.$$