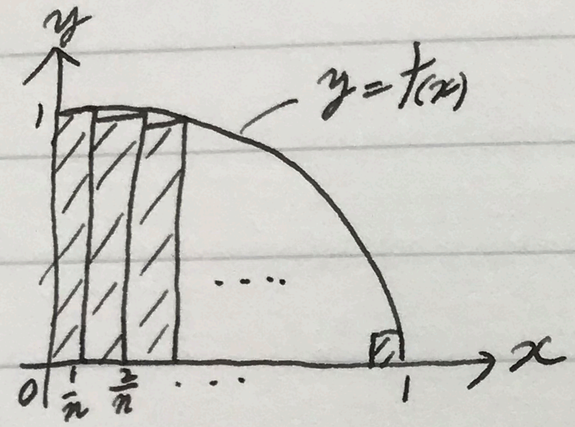
$$\int_0^1 \sqrt{1-x^2}\,dx = \frac{\pi}{4} \qquad \sqrt{1-x^2} = f(x) \text{ とおく.}$$



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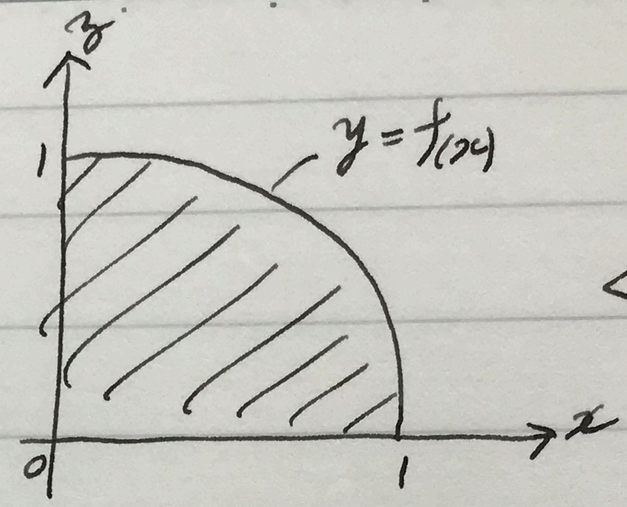

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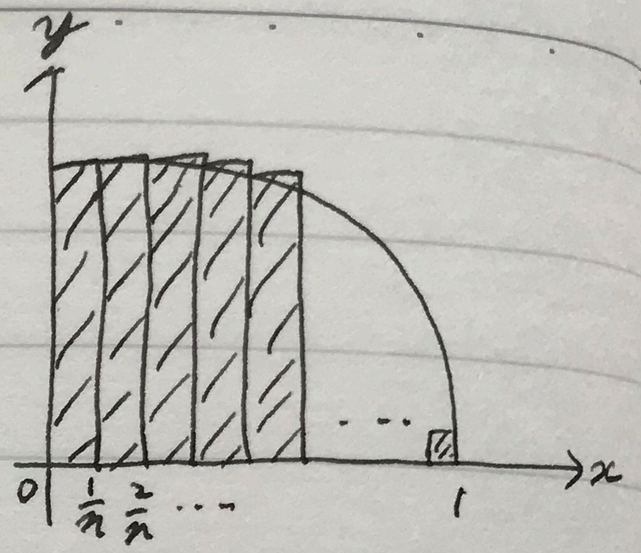

$$a_{(n)} = \sum_{k=1}^{n} \frac{1}{n} f\left(\frac{k}{n}\right) \quad < \quad \frac{\pi}{4} \quad < \quad b_{(n)} = \sum_{k=0}^{n-1} \frac{1}{n} f\left(\frac{k}{n}\right)$$

$$4a_n < \pi < 4b_n$$