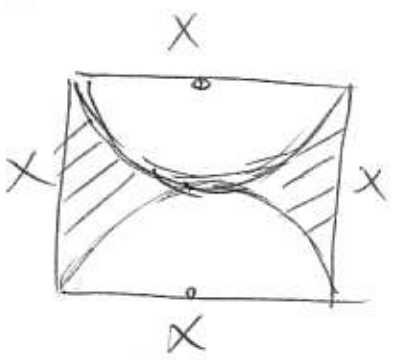


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$$\text{Prob Shaded} = \frac{\text{Area shaded}}{\text{Area total}}$$

~~Area~~

$$\text{Area Shaded} = \text{Area square} - \text{Area circle}$$

$$= x \cdot x - \pi \left(\frac{x}{2}\right)^2$$

$$\text{Area Shaded} = x^2 - \frac{\pi}{4} x^2$$

$$\text{Area Total} = \text{Area Square} = x^2$$

$$\text{Prob} = \frac{\text{Area Shaded}}{\text{Area Total}} = \frac{x^2 - \frac{\pi}{4} x^2}{x^2}$$

$$= \frac{1 - \frac{\pi}{4}}{1} = 1 - \frac{\pi}{4} \approx .215$$

21.5% Probability