

$$\text{Geometric Probability} = \frac{\text{Favorable Area}}{\text{Possible Area}}$$

Area Formulas

$$\text{Square/Rect} = \text{Length} \cdot \text{width}$$

$$\text{Triangle} = \frac{1}{2} \cdot b \cdot h$$

$$\text{Circle} = \pi r^2$$



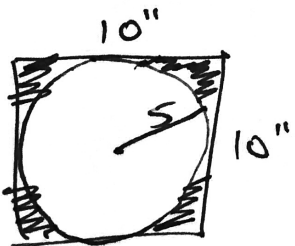
Probability random point is inside circle?

$$\text{Circle: } \pi \cdot 5^2 = 25\pi$$

$$\text{Square: } 15 \cdot 15 = 225$$

$$P(\text{circle}) = \frac{25\pi}{225} = .35$$

2. There is a circular dartboard with the radius of 5". Find the probability of not hitting the circle

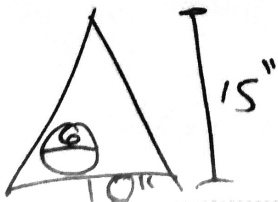


Big - Little = Left over

$$10 \cdot 10 - \pi \cdot 5^2 = 100 - 25\pi$$

$$\text{Possible } 10 \cdot 10 = 100 \quad \frac{(100 - 25\pi)}{100} = .215$$

3.



Find the probability a point chosen at random is inside the circle?

$$A(A) = \frac{1}{2} \cdot 10 \cdot 15 = 75 \quad A(\text{circle}) = \pi \cdot 3^2 = 9\pi$$

$$\frac{9\pi}{75} = .377$$