

$$\mathbb{P}(\textit{hit}) = p = 0.7 \quad \mathbb{P}(\textit{miss}) = 1 - p = 0.3$$

**1. What is the probability that you hit 7 or more of your shots?**

$$X = \text{\# hits in 10 shots}$$

$$R_X = \{0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$$

$$X \sim \textit{Bin}(10, 0.7)$$

$$\begin{aligned} \mathbb{P}(X \geq 7) &= \mathbb{P}(X = 7) + \mathbb{P}(X = 8) + \mathbb{P}(X = 9) + \mathbb{P}(X = 10) = \\ &= \binom{10}{7} (0.7)^7 (0.3)^3 + \binom{10}{8} (0.7)^8 (0.3)^2 + \binom{10}{9} (0.7)^9 (0.3)^1 + (0.7)^{10} = \\ &= 0.650 \end{aligned}$$

The probability that I hit 7 or more shots is 0.650.