# MAT434: Theory of Mathematical Statistics

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# The Binomial Distribution

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Thus

$$P(X=k) = p(k) = \binom{n}{k} p^k (1-p)^{n-k}$$

# Example

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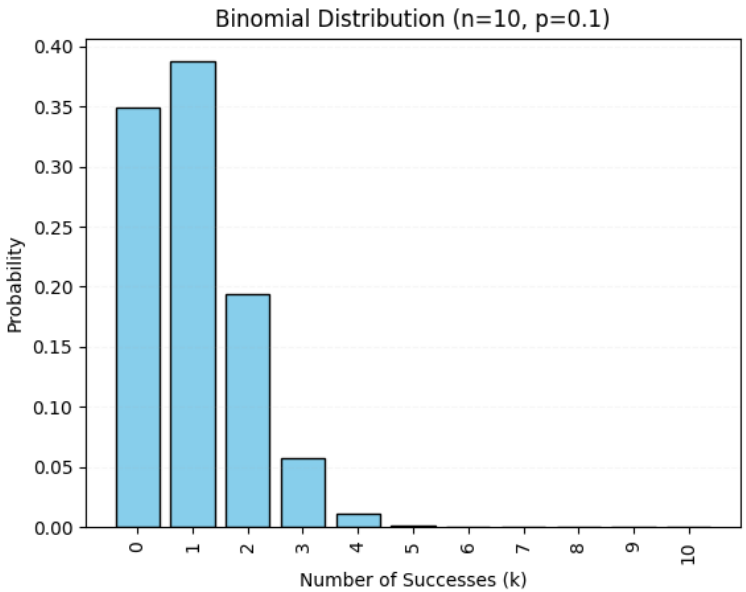


Figure: The Binomial Distribution for $n = 10$ and $p = 0.1$

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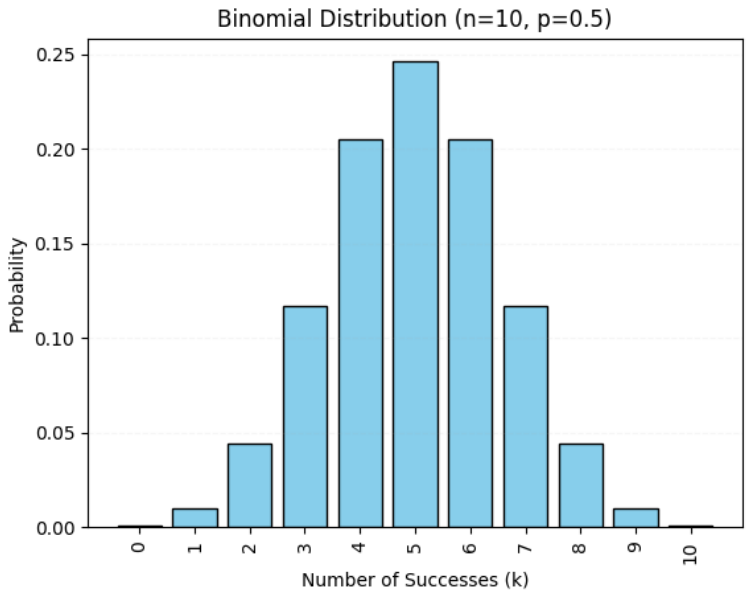


Figure: The Binomial Distribution for $n = 10$ and $p = 0.5$

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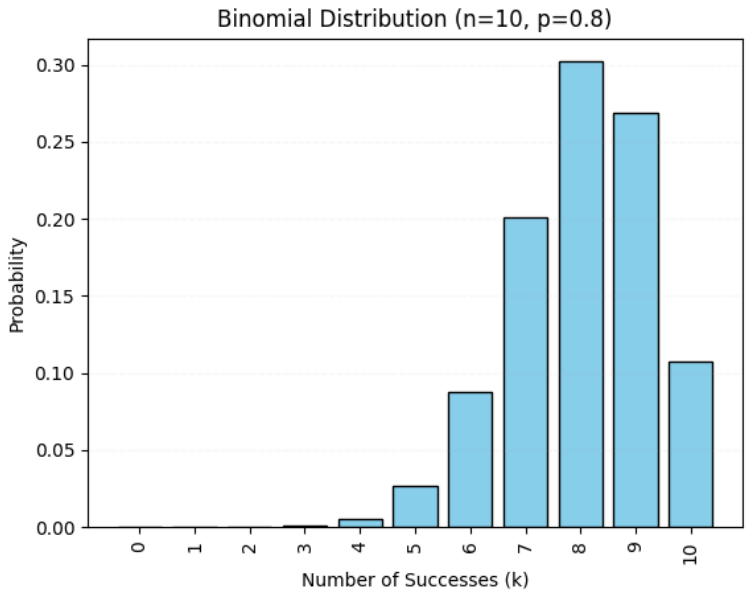


Figure: The Binomial Distribution for $n = 10$ and $p = 0.8$