Probability Distributions: Questions and Examples

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| **Distribution** | **Question it Answers** | **Real-Life Example** |
| Bernoulli | Will this event happen or not? | Checking if bulb works fine,  Tossing a coin |
| Binomial | How many successes will occur in n trials? | no of students passed in GATE with 3 attempts |
| Poisson | How many events will happen in a fixed interval? | No of customer calls/hr  No of subjects studies in a months=6 |
| Geometric | How many tries until success? | Rolling a die until we get 6  write exam until you pass |
| Normal | How are values distributed around the average? | Heights of 10 people |
| Uniform | Which outcome is equally likely? | Random lottery numbers |
| Exponential | How long until the next event? | Time between train arrival  start and end date for assignment |
| Beta | What is the probability of success for a given process? | prob of clicking an ad |