

6.3 Binomial Distributions—A special type of discrete probability distribution

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What is a **binomial setting**?

Conditions for a *binomial setting*:

B	
I	
N	
S	

What is a **binomial random variable**?

What is a **binomial distribution** and what are its *parameters*?

Determine whether the random variables below have a binomial distribution. Justify your answer.

(a) Roll a fair die 4 times and let X = the number of sixes.

(b) Shoot a basketball 20 times from various distances on the court. Let Y = number of shots made.

(c) Observe the next 100 cars that go by and let C = color.

(d) Shuffle a deck of cards. Turn over the first 10 cards, one at a time. Let Y = the number of aces you observe.