

## A random variable

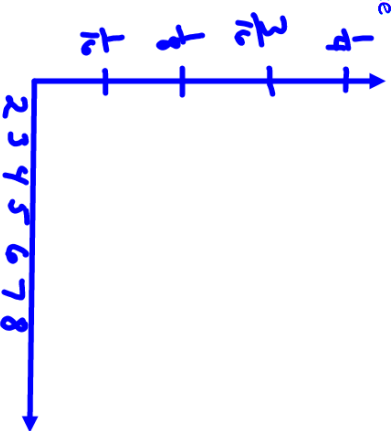
### A probability distribution

## A binomial experiment has two possible outcomes.

### In a binomial experiment,

## A binomial distribution

Example: rolling two 4-sided dice



A survey of high school juniors found that 84% of students plan on attending college. If you pick three students at random, what is the probability that at least two plan on attending college? Round to the nearest percent.

a. 41%                      b. 93%                      c. 7%                      d. 34%

A poll shows that 77% of voters in a city favor an initiative to increase spending on public schools. If 10 voters are selected at random, what is the probability that exactly five of them will vote in favor of the initiative?

- a. 14%
- b. 9%
- c. 4.4%
- d. 28%

Jack is flipping a coin. The two possible outcomes are heads or tails. What is the probability that the result will have exactly 29 tails after 44 flips? Express your answer rounded to five decimal places.

Betsy is rolling a 12-sided die. What is the probability that the result will have exactly 4 twos after 7 rolls? Express your answer rounded to five decimal places.

Julie is rolling a 14-sided die. What is the probability that the result will have exactly 4 twelves after 8 rolls? Express your answer rounded to five decimal places.