Compound Events

When two events happen either at the same time or one after the other.

Independent Events

One event does NOT affect another event.

Example:
Suppose you roll a 6-sided dice two times.

Find P(3 then 6).

Independent Events

One event does NOT affect another event.

Example:

Suppose you pick a chip from a bag with chips numbered 1-5, ***replace*** the 1st chip and then draw a 2nd chip.

Find P (3 then 5).

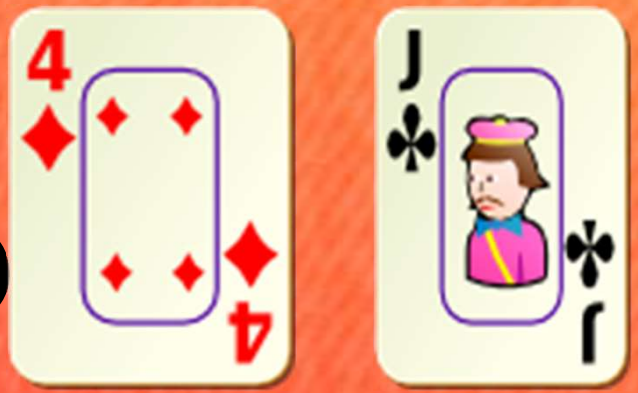
Independent Events

One event does NOT affect another event.

Example:

Suppose you randomly draw a card from a standard deck of cards, ***<u>replace</u>*** the 1st card and then draw a 2nd card.

Find P (4 then Jack)



Independent Events

One event does NOT affect another event.

What is another example of compound events that are independent?

Dependent Events

One event DOES affect another event.

Example:

Your playlist in your Itunes account can be set to random. It will not repeat a song until it has played all other songs. There are 13 songs on your favorite playlist.

Find P(song #4 then #8).

Dependent Events

One event DOES affect another event.

Example:

Suppose you pick two chips from a bag with chips numbered 1-5, ***without replacing*** the 1st chip.

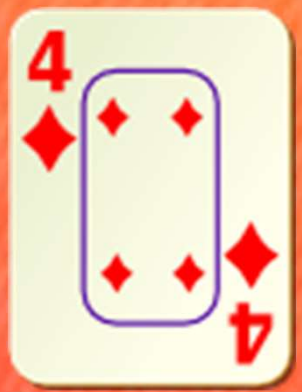
Find P (3 then 5).

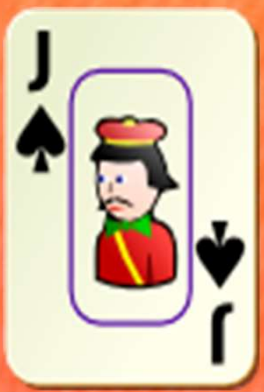
Dependent Events

One event DOES affect another event.

Example:

Suppose you randomly draw two cards from a standard deck of cards, ***<u>without</u> <u>replacing</u>*** the 1st card.





Find P (4 then Jack).

Dependent Events

One event DOES affect another event.

What is another example of compound events that are dependent?

Which is which?

You are not sure whether white or blue socks will match your outfit.

- **In your sock drawer you have 7 pairs of white socks, 4 pairs of blue socks, and 3 pairs of black socks.**
- **So, from your sock drawer you randomly pick two pairs of socks without replacing them.**

Find P(white then blue).

Which is which?

On Thanksgiving Day my family plays a game that goes like this...

- **You roll one fair 6-sided die and then draw one card from a standard deck of cards.**
- **Find P(5 then queen).**