

## Stable Matching, More Formally

**Perfect matching:**

- Each rider is paired with exactly one horse.
- Each horse is paired with exactly one rider.

**Stability:** no ability to exchange

an unmatched pair  $r-h$  is **blocking** if they both prefer each other to current matches.

**Stable matching:** perfect matching with no blocking pairs.

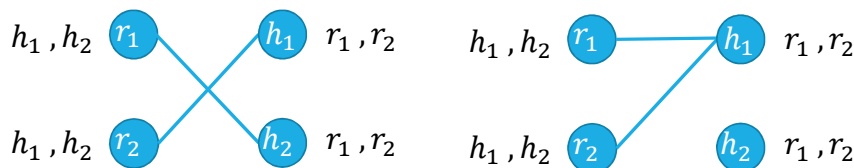
### Stable Matching Problem

**Given:** the preference lists of  $n$  riders and  $n$  horses.

**Find:** a stable matching.

## Try it!

Why are these not stable matchings?



Find a stable matching for this instance.

