

Ex. Applications

	Arts	Science	Total
Men	2000	4000	6000
women	3000	3000	6000

Admitted

	Arts	Science	total
Men	800	3000	3800
women	1300	2300	3600

Is there an bias towards men/women.

$$P(\text{admitted} | \text{man}) = \frac{3800}{6000}$$

$$P(\text{admitted} | \text{woman}) = \frac{3600}{6000}$$

↳ Apparently there is some bias towards men.

## Science :

$$P(\text{man admitted} \mid \text{he applies to scienc}) = \frac{3000}{4000} = 0.75$$

$$P(\text{woman adm} \mid \text{she applies to sc.}) = \frac{2300}{3000} = 0.767$$

∴ In science school there is a bias towards women.

## Arts

$$P(\text{man adm.} \mid \text{he applies}) = \frac{800}{2000} = 0.4$$

$$P(\text{woman adm} \mid \text{she applies}) = \frac{1300}{3000} = 0.433$$

Arts schools is favouring women.

$$P(\text{admiss} | \text{Arts}) = \frac{8200}{5000} = 0.42$$

$$P(\text{admiss} | \text{Sci}) = \frac{5300}{7000} = 0.757$$

The reason is Arts school is difficult to get admission in.

More women are applying there than men.

~~Q. 2.~~