Hoofdstuk 9

Bijlage 9.1

Population mean:

$$\mu = \sum xP(x)$$
$$= 1(1/6) + 2(1/6) + 3(1/6) + 4(1/6) + 5(1/6) + 6(1/6)$$
$$= 3.5$$

Bijlage 9.2

Population variance:

$$\sigma^2 = \sum (x - \mu)^2 P(x)$$
$$= (1 - 3.5)^2(1/6) + (2 - 3.5)^2(1/6) + (3 - 3.5)^2(1/6) + (4 - 3.5)^2(1/6)$$
$$+ (5 - 3.5)^2(1/6) + (6 - 3.5)^2(1/6)$$
$$= 2.92$$

Population standard deviation:

$$\sigma = \sqrt{\sigma^2} = \sqrt{2.92} = 1.71$$

Bijlage 9.3
Blokje 319

Sampling Distribution of a Sample Proportion

1. $\hat{P}$ is approximately normally distributed provided that np and $n(1 - p)$ are greater than or equal to 5.
2. The expected value: $E(\hat{P}) = p$
3. The variance: $V(\hat{P}) = \sigma^2_{\hat{p}} = \dfrac{p(1 - p)}{n}$
4. The standard deviation: $\sigma_{\hat{p}} = \sqrt{p(1 - p)/n}$

(The standard deviation of $\hat{P}$ is called the **standard error of the proportion**.)

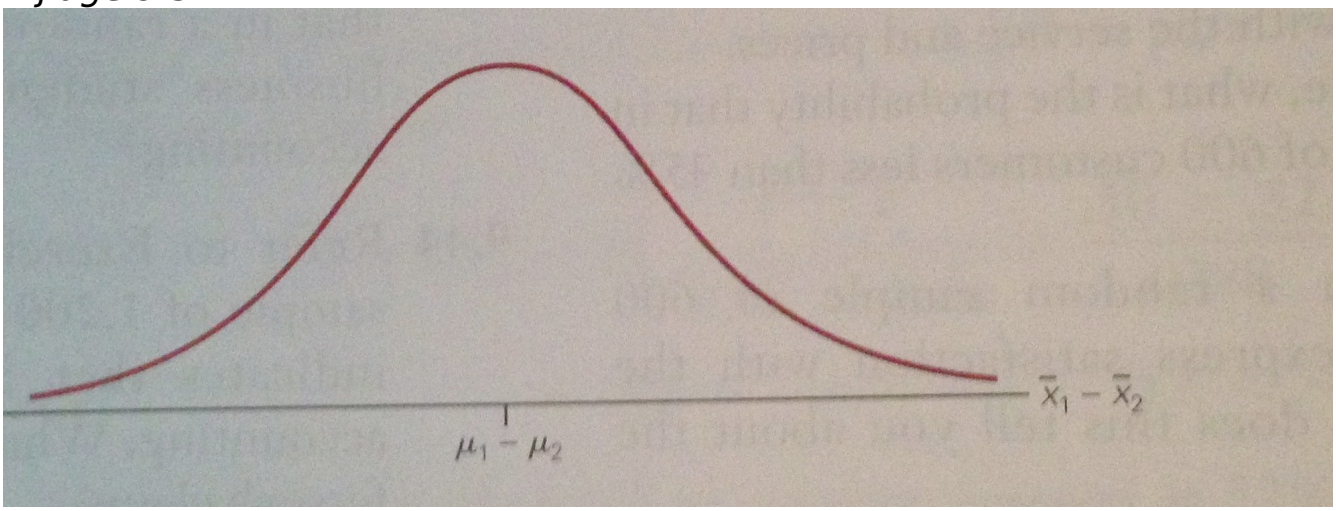
Bijlage 9.4

$$\mu_{\bar{x}_1 - \bar{x}_2} = \mu_1 - \mu_2$$

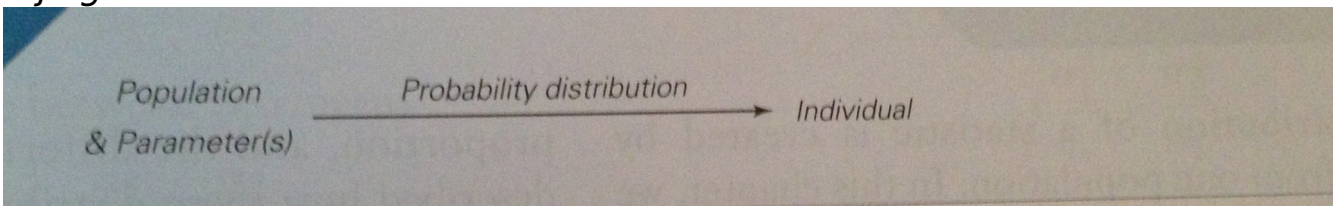
and

$$\sigma^2_{\bar{x}_1 - \bar{x}_2} = \frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}$$

Bijlage 9.5



Bijlage 9.6



Bijlage 9.7