

POP. $N = 3000$

ECHANT.

$\mu = 200000$ moy.

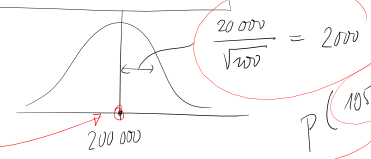
$n = 100$ $n \geq 30$
TCL ✓

$\sigma = 20000$ écart-type

$N = 3000 \geq 20 \cdot n = 2000$

\Rightarrow « Pop. grande »

Distrib. des moy. des échant



écart-type à calculer

$P(195000 < X < 205000)$
 $N(200000, 20000^2)$

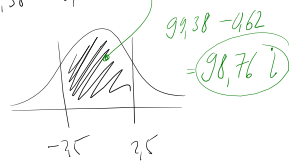
$$\frac{195000 - 200000}{20000} = -2,5$$

$$\frac{205000 - 200000}{20000} = 2,5$$

$P(-2,5 < Z < 2,5)$ pour $N(0, 1^2)$



$$100 - 99,38 = 0,62\%$$



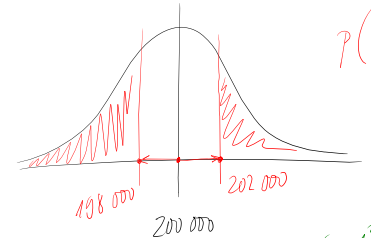
$$99,38 - 0,62 = 98,76\%$$

Réponse de la question d)

$$P(195K < X < 205K) = 98,76\%$$

probab d'un écart de 2000 CHF :

$P(X \geq 202K \text{ ou } X \leq 198K)$

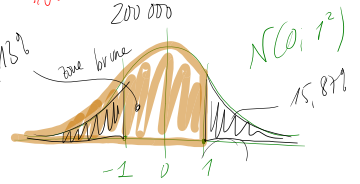


$$Z = \frac{202000 - 200000}{20000}$$

$$= 1$$

$$P(Z \geq 1 \text{ ou } Z \leq -1) = 2 \cdot 15,87\% = 31,74\%$$

$P(Z < 1)$ \downarrow $84,13\%$



31,74% de chances d'être à plus de 2000 CHF de 200000