

ferro

Fe

acciaio

Fe + 0.2% - 1%
C

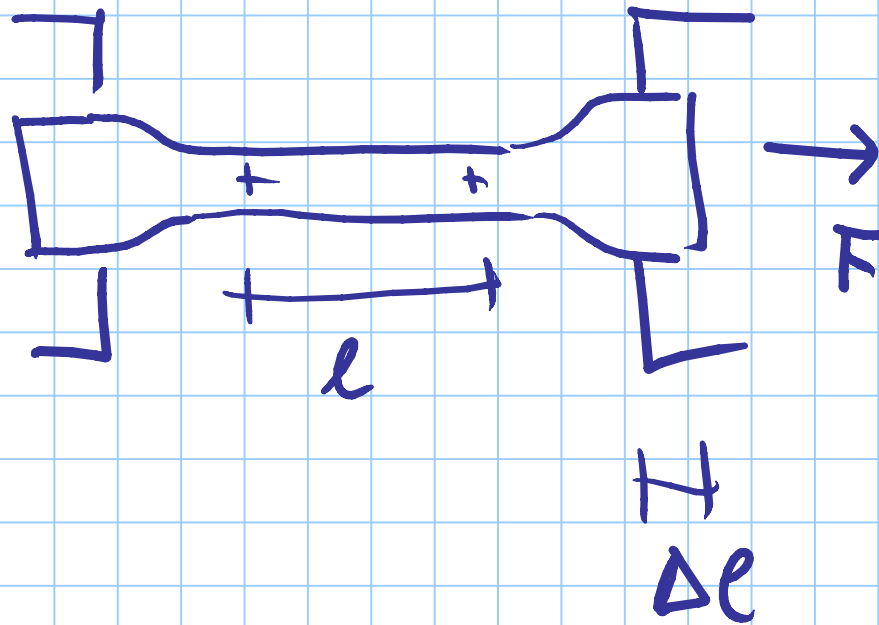
ghisa

C più alti

RESISTENZA

DUTTILITA'

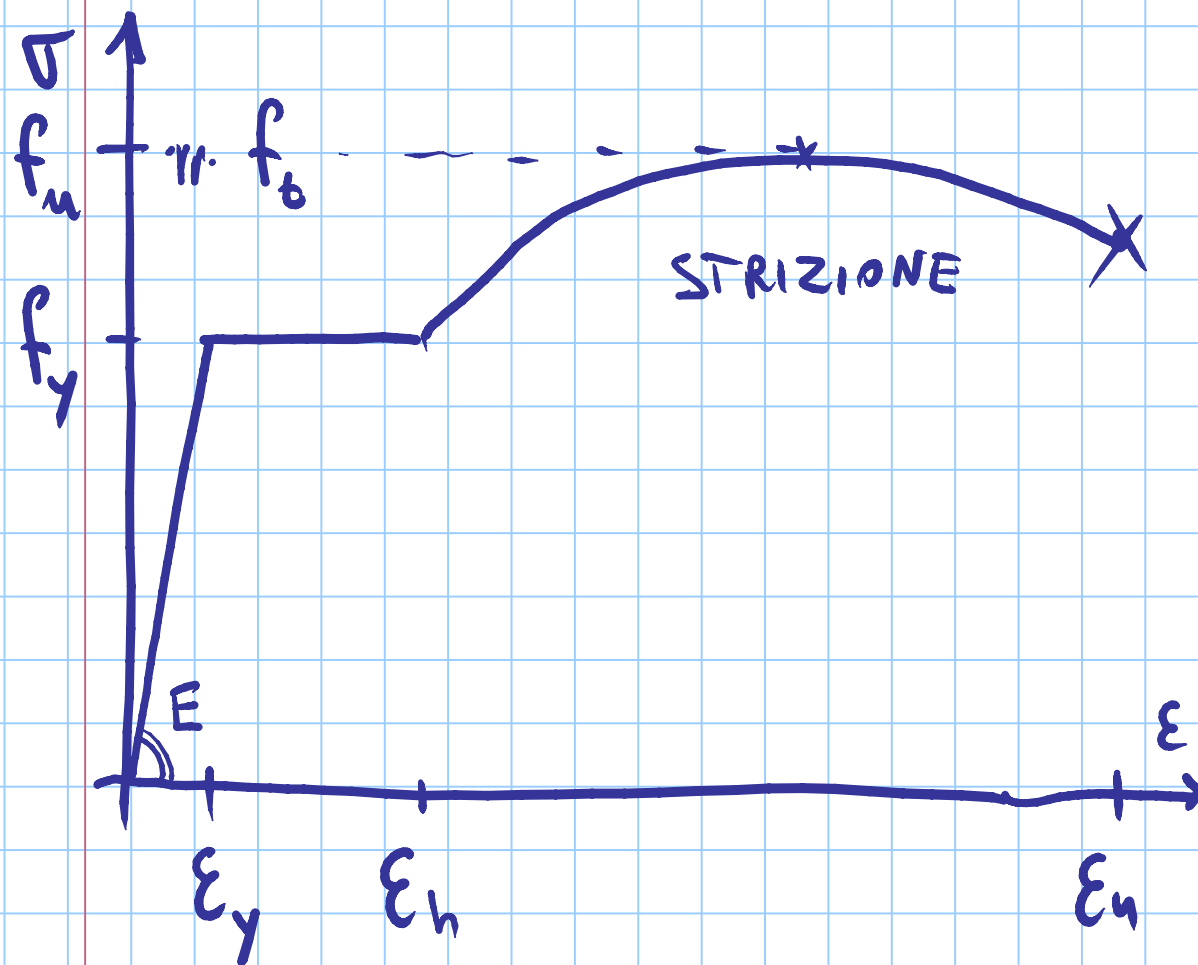
RIGIDEZZA



 area A

$$\sigma = \frac{F}{A}$$

$$\epsilon = \frac{\Delta l}{l}$$



tir. elastico

$$\frac{\sigma}{\epsilon} = E \quad \text{mod. di elasticità}$$

yielding = snervamento

hardening = incrudimento

ultimate = ultimo (max)

tensile = a trazione

UNITA' DI MISURA

S.I.

sistema internazionale

lunghezza m

massa Kg

tempo s

forza N

multiplo kN

massa \times $\frac{\text{lunghezza}}{\text{tempo}^2}$

tensione Pa = 1 N/m^2

multiplo MPa = $10^6 \text{ Pa} = 1 \text{ N/mm}^2$

S.T.

sistema tecnico

forza Kg_p

S.T.

Kg_p/cm^2

ACCIAIO PER CARPENTERIA METALLICA

S 235

S 275

S 355

$f_y =$

235

275

355 MPa

$f_u =$

360

430

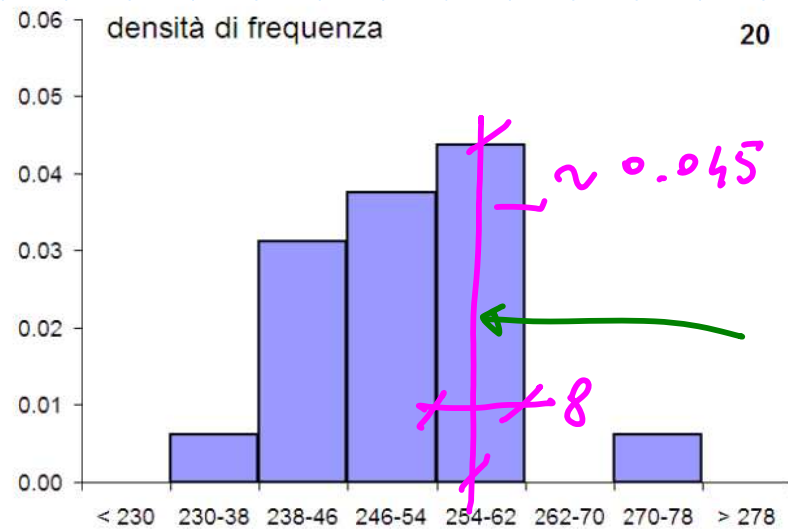
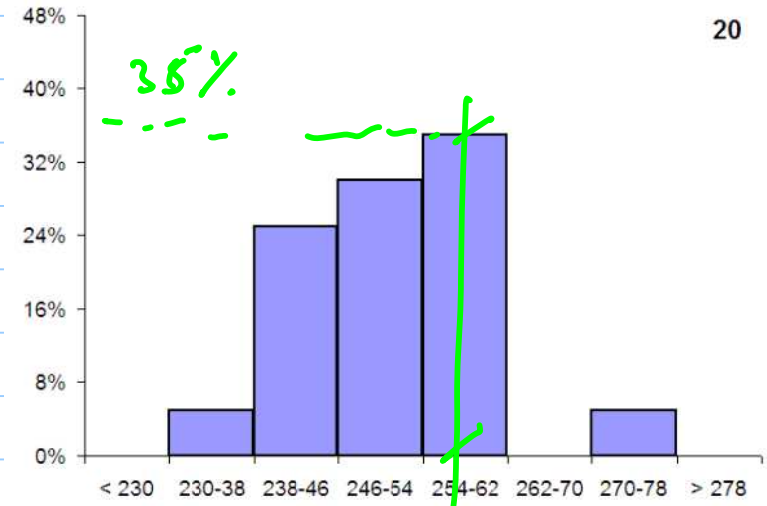
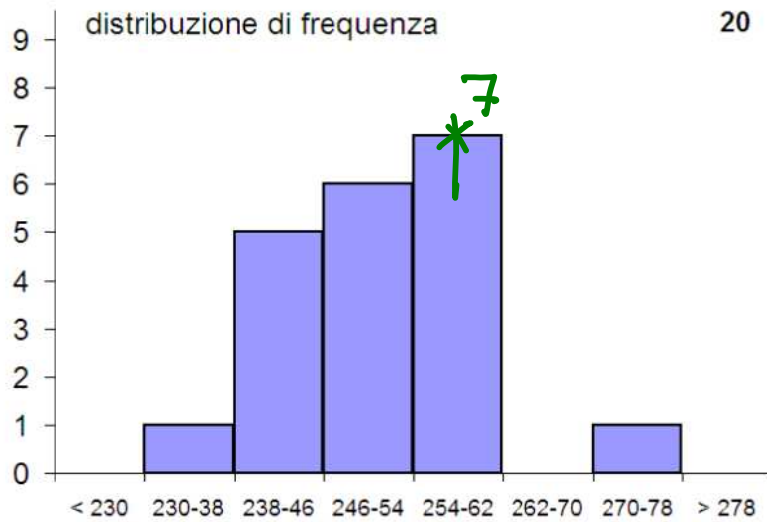
510 MPa

vecchie
denomin.

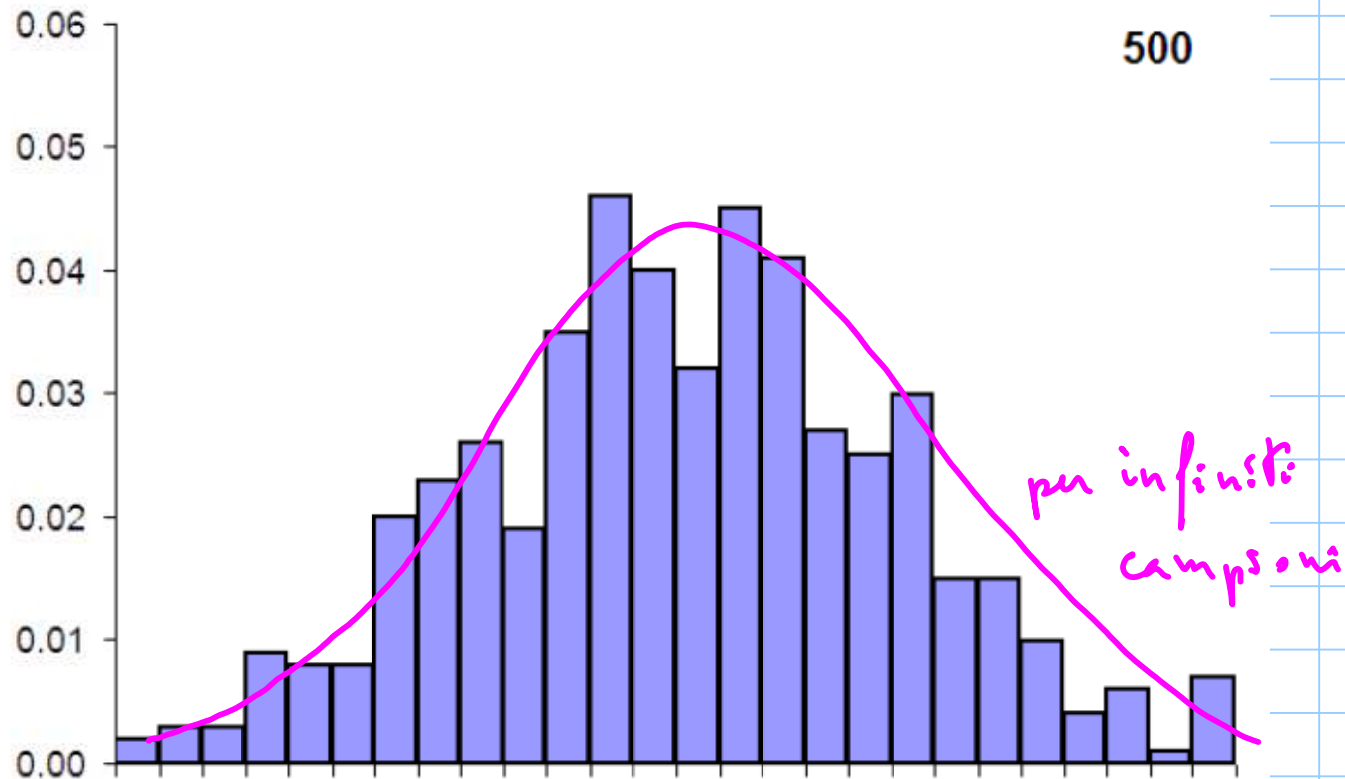
Fe 360

Fe 430

Fe 510

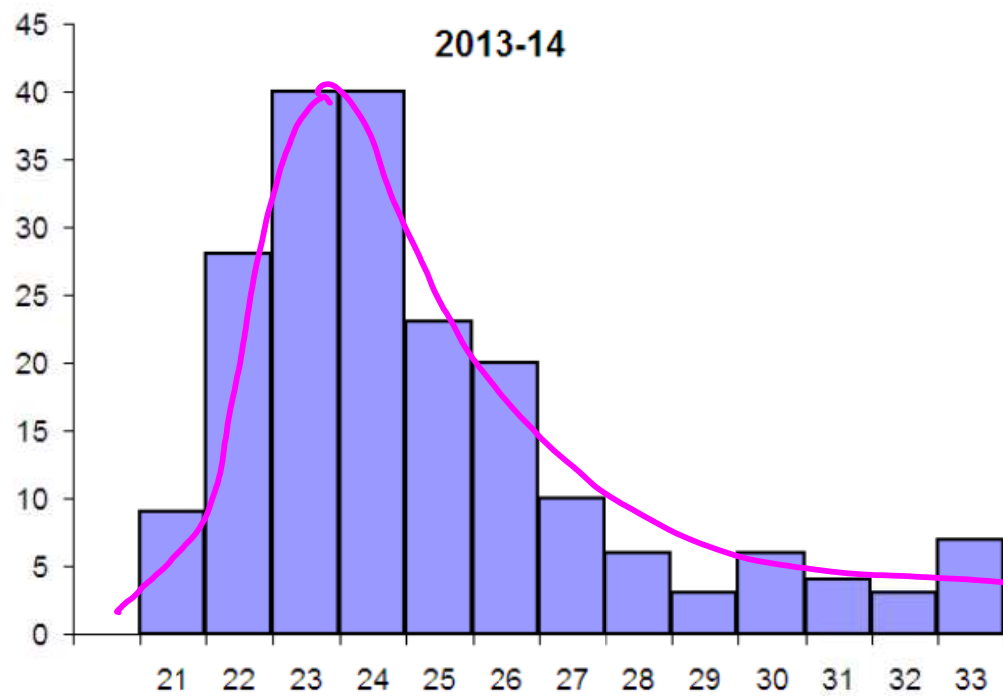


$\frac{7}{20}$
 n. campioni nella classe
 n. Totale
 8
 ampiezza classe

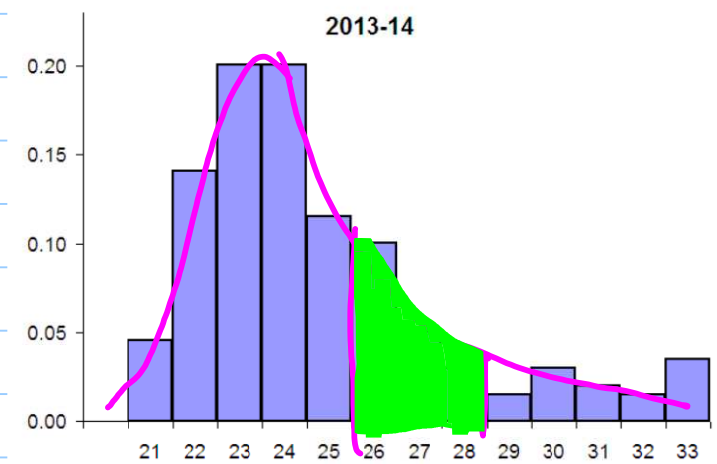


distribuzione Gaussiana

$$p(x) = \frac{e^{-\frac{1}{2}\left(\frac{x-\mu}{\sigma}\right)^2}}{\sqrt{2\pi} \cdot \sigma}$$



eta
degi
studenti

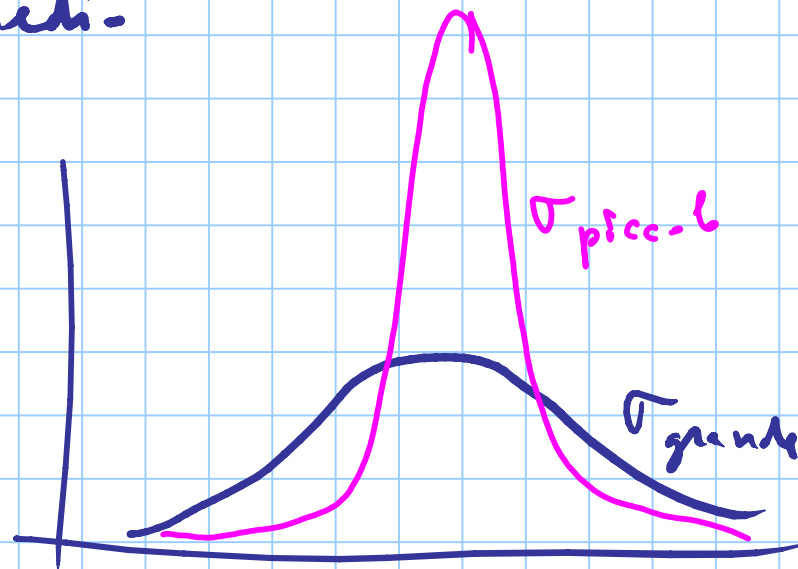


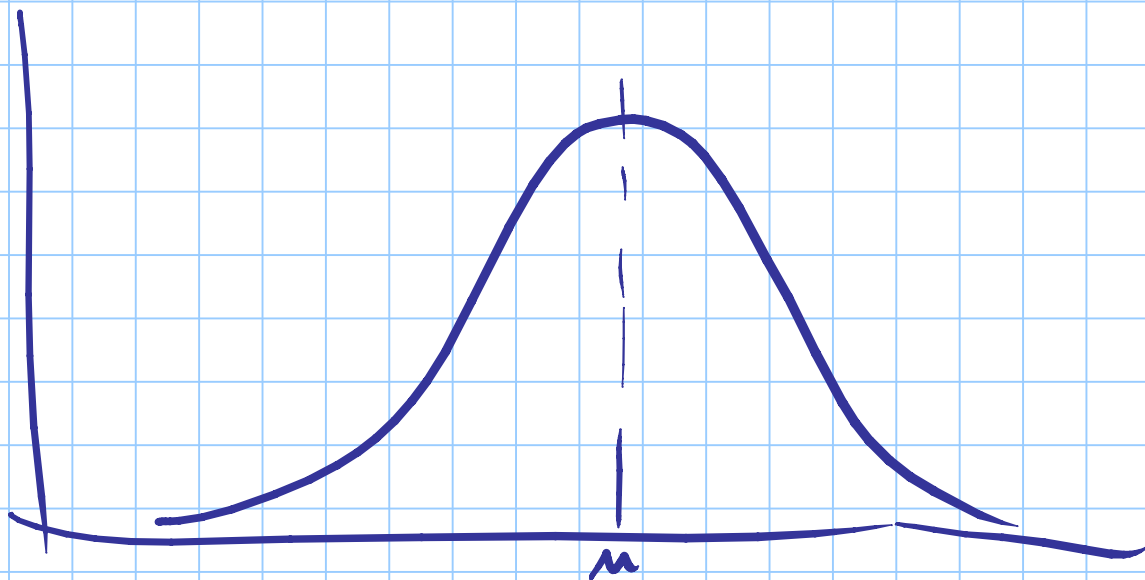
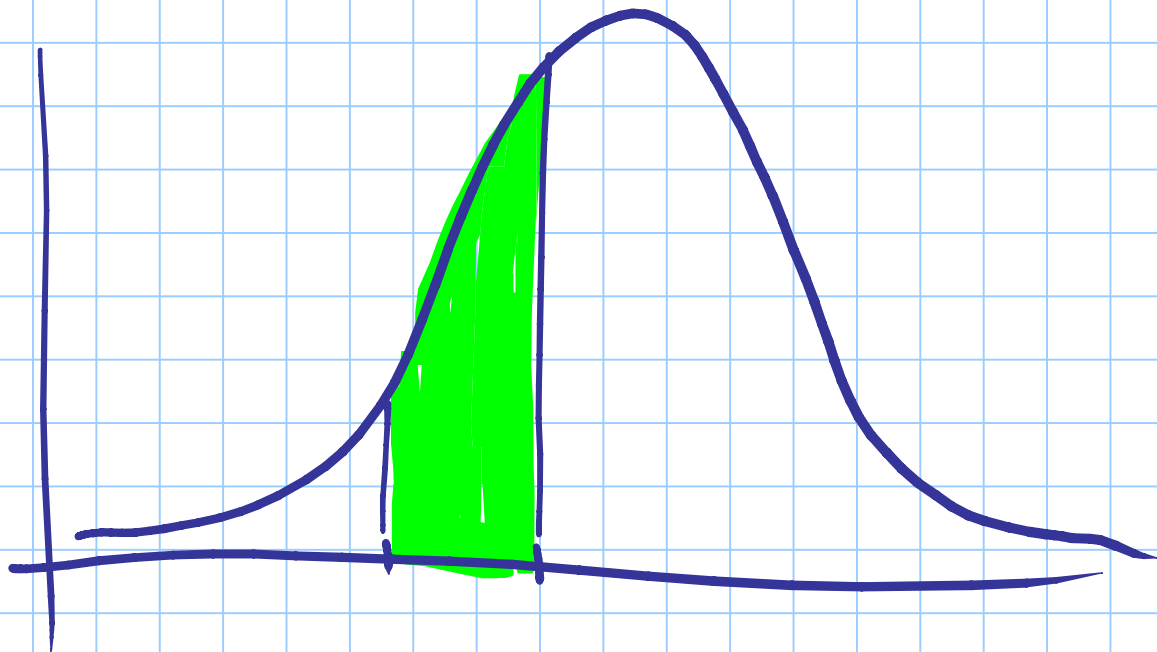
μ valore medio

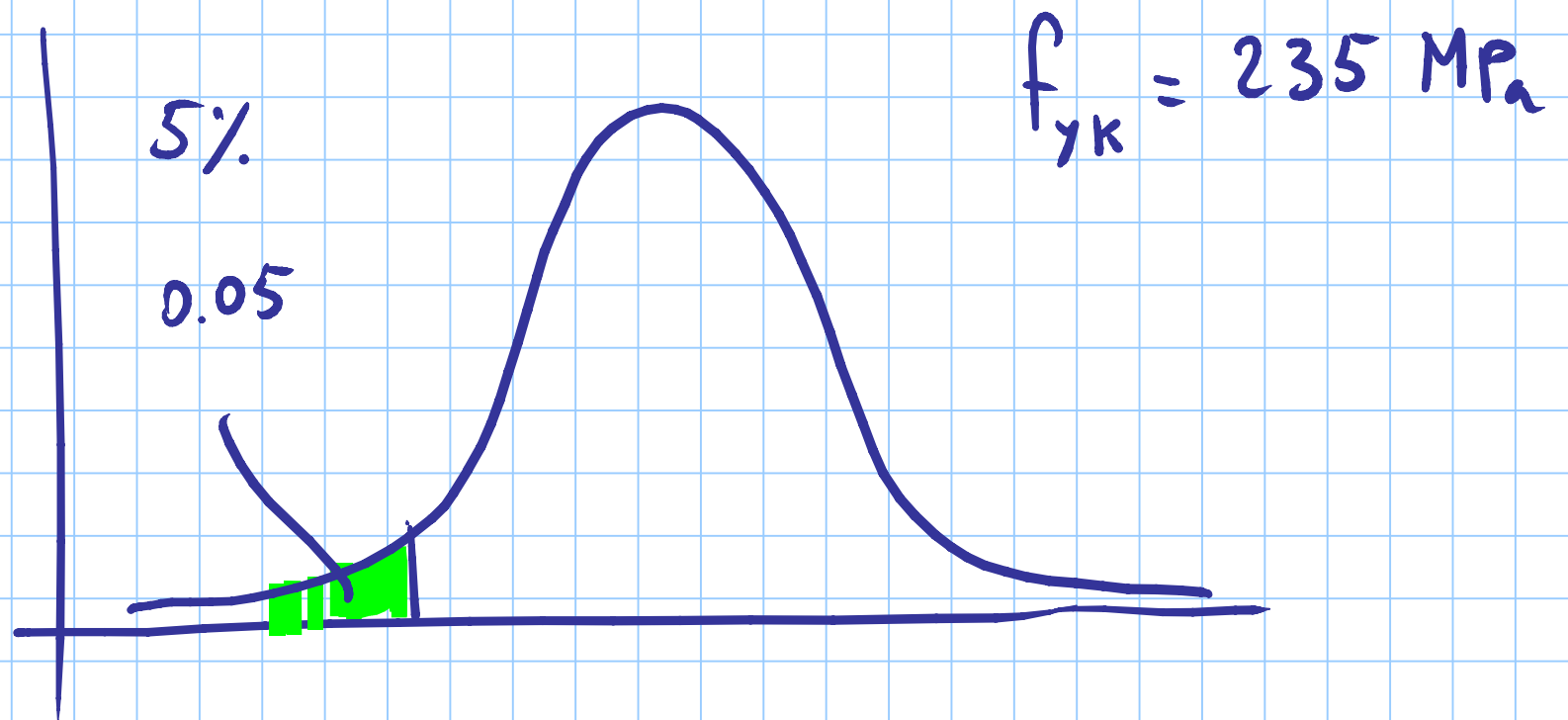
$$\mu = \frac{\sum_{i=1}^n N_i}{n}$$

σ scarto quadratico medio

$$\sigma = \sqrt{\frac{\sum_{i=1}^n (N_i - \mu)^2}{n - 1}}$$







FRATTILE 5%

VALORE
CARATTERISTICO k

CARICHI

g permanenti

q variabili

VALORE CARATTERISTICO $f_{\text{utile}} 95\%$

g_k

q_k $f_{\text{utile}} 95\%$ riferito ai massimi in un
Tempo di riferimento (50 anni)

q frequente fattibile 95% nel tempo

quasi permanente valore medio nel tempo

q valore critt. $>$ valore fug. $>$ valore quasi permanenti
(crisi)

q_k

$\psi_1 q_k$

$\psi_2 q_k$

$$1 \geq \psi_1 \geq \psi_2$$