3.14

Wartość oczekiwana

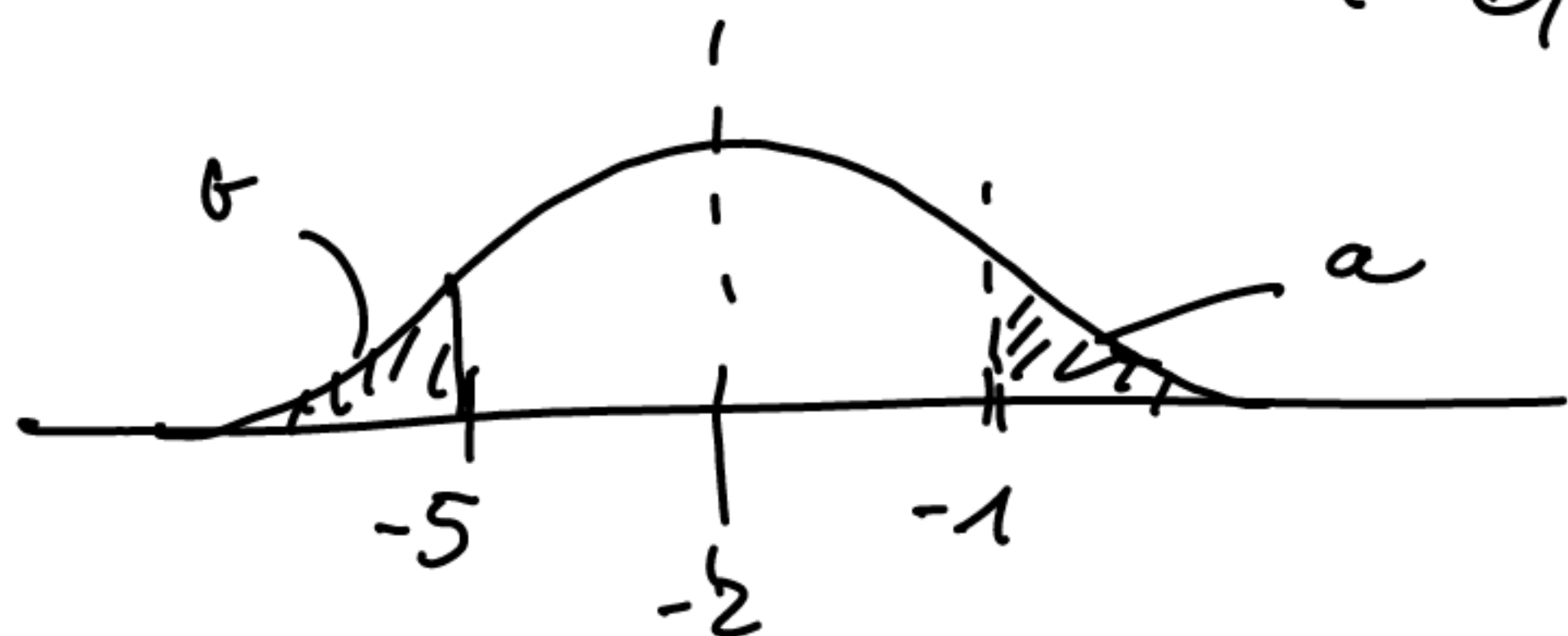X ma rozkład $N(-2, 3)$ — odchylenie standardowe

Obliczyć:

$$Y = \frac{X - m}{\delta}$$

b) $P(X < -5) = P\left(\frac{X+2}{3} < \frac{-5+2}{3}\right) =$

$= P(Y < -1) = \Phi(-1)$ — dystrybuanta $0,1$

$\underline{\Phi(-x)} = 1 - \underline{\Phi(x)} = 1 - 0,8413 \approx 0,16$

δ

a

NA TEŚCIE

-5   -1

-2

a) $P(X > -1) = P\left(\frac{X+2}{3} > \frac{-1+2}{3}\right) =$

$= P\left(Y > \frac{1}{3}\right) = 1 - \Phi\left(\frac{1}{3}\right) = 1 - 0,63 = 0,37$

c) $P(-5 < X < -1) = P\left(\frac{-5+2}{3} < \frac{X-2}{3} < \frac{-1+2}{3}\right) =$

$= P(-1 < Y < 0,33) = \Phi(0,33) - \Phi(-1) = \Phi(0,33) - 1 + \Phi(1)$