Ex 1: $\mu = 0$ $\sigma = 1$
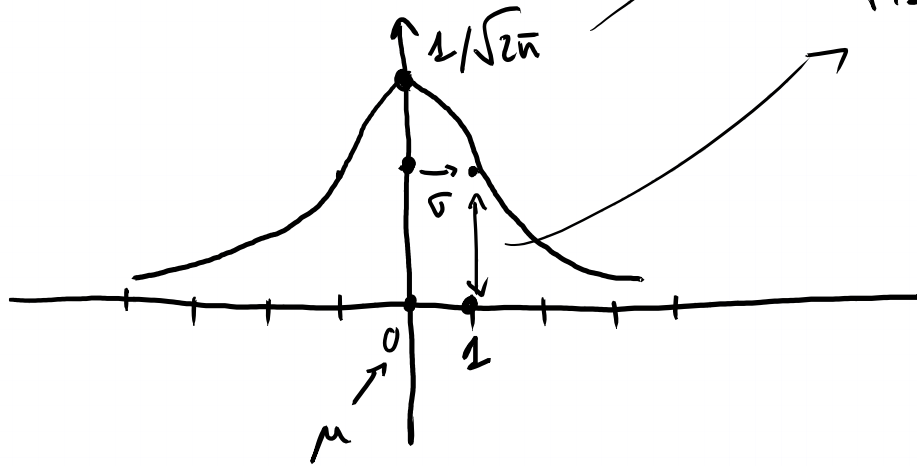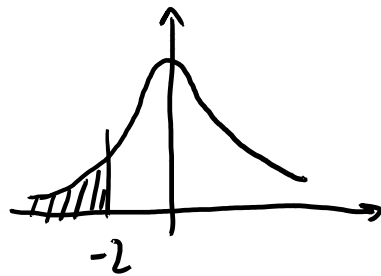
$$f(x) = \frac{1}{\sqrt{2\pi}} e^{-\frac{x^2}{2}}$$

$f(0) = \frac{1}{\sqrt{2\pi}}$
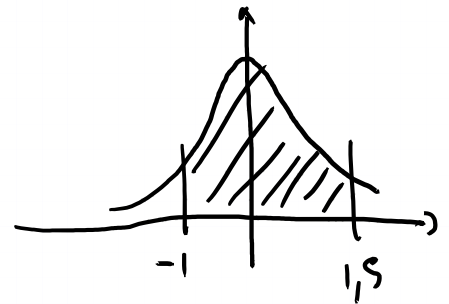
$f(1) = \frac{1}{\sqrt{2\pi}} e^{-1/2}$

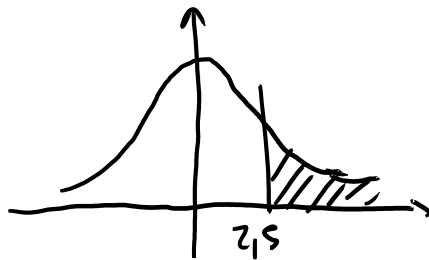

$1/\sqrt{2\pi}$

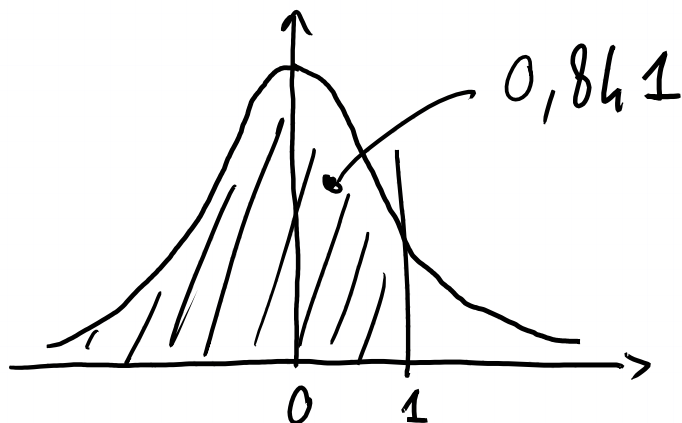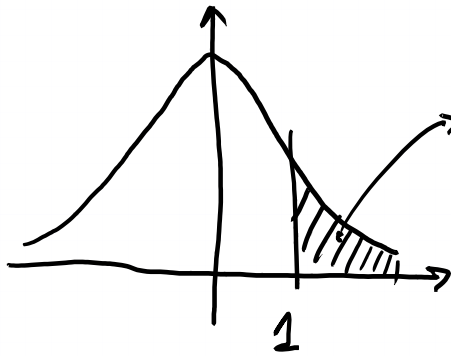$\vec{\sigma}$

0 1

μ

a)

-2

b)

-1 $1,5$

c)

$2,5$

Ex 2:

$0,841$

0 1

1. $P(X < 1) = P(X \leq 1) = 0,841$
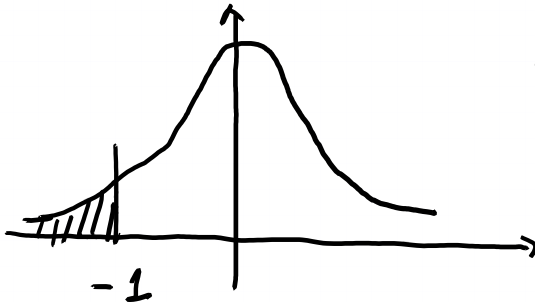
2.

$$P(X \geqslant 1) = 1 - P(X \leq 1) =$$
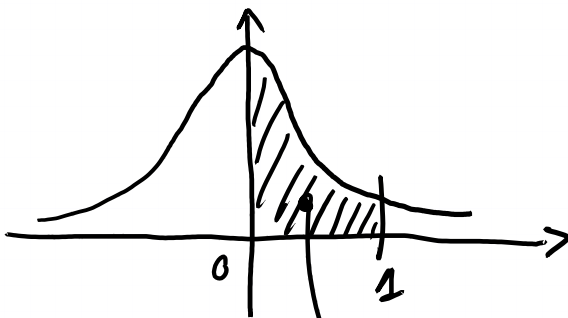$$= 1 - 0{,}841 = 0{,}159$$

3.

$$P(X \leq -1) = P(X \geqslant 1) = 0{,}159$$

4.

$$P(-\infty < X < +\infty) = 1$$
$$\hookrightarrow P(X < 0) = \tfrac{1}{2}$$

$$P(0 \leq X \leq 1) = P(X \leq 1) - \tfrac{1}{2} =$$
$$= 0{,}841 - 0{,}5 = 0{,}341$$