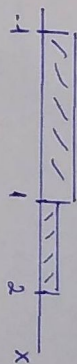
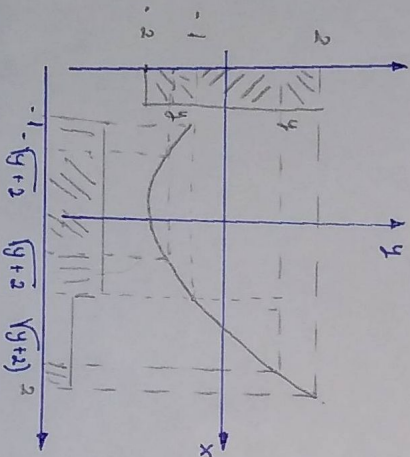


X zoriako aldagaiak dentsitate - funtzio hau du:

$$f(x) = \begin{cases} 0 & x \notin (-1, 2) \\ 2/5 & x \in (-1, 1) \\ 1/5 & x \in (1, 2) \end{cases}$$

$y = x^2 - 2$  bada, kalkulatu  $f(y)$  eta  $F(y)$

$$F(x) = \begin{cases} 0 & x < -1 \\ 2/5(x+1) & x \in (-1, 1) \\ 4/5 + 1/5(x-1) & x \in (1, 2) \\ 1 & x > 2 \end{cases}$$



Jatorrizko banaketak: unijormea  
 Eraldaketak erlazioa:  $\downarrow$  eta lineala  
 Eraldaketak banaketak: eta unijormea

$$\left[ \begin{matrix} -2 < y < -1 \\ -1 < x < 1 \end{matrix} \right] \quad \left[ \begin{matrix} -1 < x < 1 \end{matrix} \right]$$

$$[F(y) - F(-2)] \cdot \frac{1}{y} = [F(\sqrt{y+2}) - F(-\sqrt{y+2})] \cdot x$$

$$F(y) = \frac{2}{5} (\sqrt{y+2} + 1) - \frac{2}{5} (-\sqrt{y+2} + 1) = \frac{4}{5} \sqrt{y+2}$$

$$f(y) = \frac{dF(y)}{dy} = \frac{4}{5} \cdot \frac{1}{2} \cdot \frac{1}{\sqrt{y+2}} = \frac{2}{5\sqrt{y+2}}$$

$$\left[ \begin{matrix} 1 < x < 2 \\ -1 < y < 2 \end{matrix} \right]$$

$$[F(2) - F(y)] \cdot \frac{1}{y} = [F(\sqrt{y+2}) - F(\sqrt{y+2})] \cdot x$$

$$\cancel{1} - F(y) = \cancel{1} \cdot (4/5 + 1/5(\sqrt{y+2} - 1))$$

$$F(y) = \frac{4}{5} + \frac{1}{5} (\sqrt{y+2} - 1) = \frac{3}{5} + \frac{1}{5} \sqrt{y+2}$$

$$f(y) = \frac{dF(y)}{dy} = \frac{1}{10\sqrt{y+2}}$$