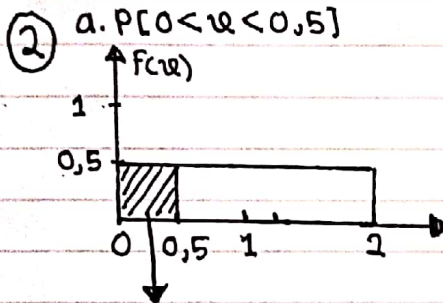


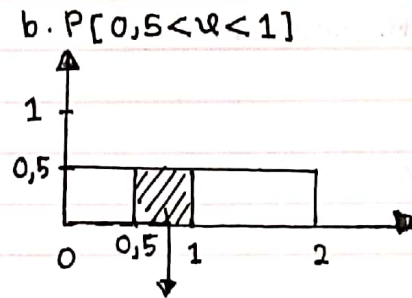
TOPIC 6

→ Latihan Soal 1

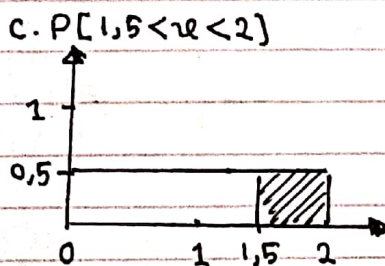
- ① Fungsi (a) dan (c) dapat menjadi fungsi densitas probabilitas karena memenuhi sifat fungsi ~~fungsi~~ yaitu, $f(u) \geq 0$ dan area di bawah fungsi = 1. Sedangkan fungsi (b) tidak memenuhi karena $f(u) < 0$ dan fungsi (d) tdk memenuhi karena luas daerah dibawah fungsi $\neq 1$.



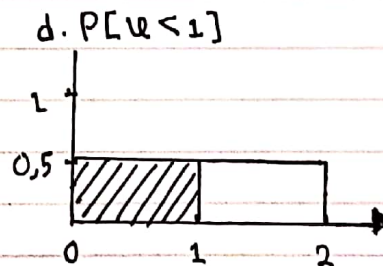
$$P[0 < u < 0,5] = 0,5 \times 0,5 \\ = 0,25 //$$



$$P(u < 1) - P(u < 0,5) \\ = 0,5 - 0,25 \\ = 0,25 //$$

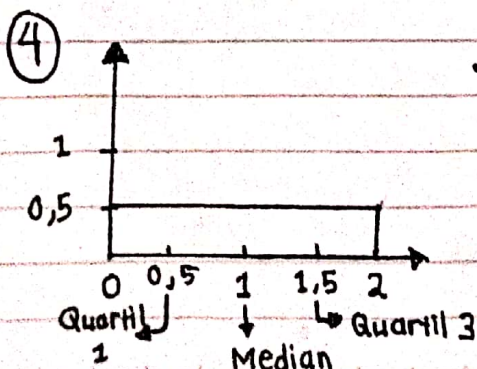


$$P(u < 2) - P(u < 1,5) \\ = 1 - 0,75 \\ = 0,25 //$$



$$P(u < 1) \\ = 1 \times 0,5 \\ = 0,5 //$$

- ③ $[1,5 < u < 2]$ memiliki probabilitas yg lebih besar dari $[0 < u < 0,5]$ karena luas daerah di bawah fungsi $[1,5 < u < 2]$ lebih besar.

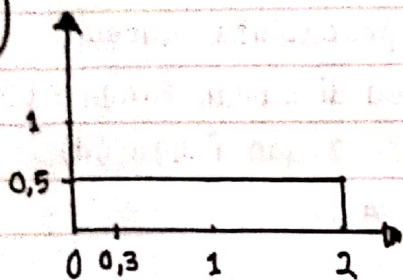


- Kuartil 1 = 0,5
- Median = 1
- Kuartil 3 = 1,5

⑤

15th percentile:

$$\frac{2}{100} \times 15 = 0,3 //$$



↳ 15th percentile

→ Latihan Soal 2

A. Kurva ke-2

B. Kurva ke-3

→ Latihan Soal 3

$$\begin{aligned} \textcircled{1} \text{ Hitung } P[-0,155 < Z < 1,60] \\ &= P(Z < 1,60) - P(Z < -0,155) \\ &= 0,9452 - 0,4384 \\ &= 0,5068 \end{aligned}$$

$$\begin{aligned} \textcircled{2} & \cdot P(Z < -1,9) \\ &= 0,0287 // \\ & \cdot P(Z > 2,1) \\ &= 1 - P(Z < 2,1) \\ &= 1 - 0,9821 \\ &= 0,0179 // \end{aligned}$$

$$\begin{aligned} \textcircled{3} P(Z > z) &= 0,025 \\ \cancel{1 - P(Z < z)} &= 0,025 \\ P(Z < z) &= 0,975 \\ z &= 1,96 // \end{aligned}$$

$$\begin{aligned} \textcircled{4} P(-z \leq Z \leq z) &= 0,90 \\ P(Z \leq z) - P(Z \leq -z) &= 0,90 \\ \text{Misal, } z &= 1,645 // \\ P(Z \leq 1,645) - P(Z \leq -1,645) \\ &= 0,95 - 0,05 \\ &= 0,90 // \end{aligned}$$