A27 Vest

$$f_Y(y) := \begin{cases} \frac{2-y}{3} & \text{für } y \in \{0,1,2\} \\ 0 & \text{sonst} \end{cases}$$

$$f_Y(1) = \frac{2-1}{3} = \underline{\underline{\frac{1}{3}}}$$

$$P(Y \geq 1) = \frac{2-1}{3} + \frac{2-2}{3} = \underline{\underline{\frac{1}{3}}}$$

$$P(0{,}5 \leq Y \leq 1{,}5) = P(1) = \underline{\underline{\frac{1}{3}}}$$

$$E(Y) = \sum_k k \cdot f_Y(k) = 0 \cdot \frac{2-0}{3} + 1 \cdot \frac{2-1}{3} + 2 \cdot \frac{2-2}{3} = \underline{\underline{\frac{1}{3}}}$$

$$Var(Y) = E(Y^2) - E(Y)^2$$

$$E(Y^2) = \underline{\underline{\frac{1}{3}}}$$

$$Var(Y) \Rightarrow \frac{3}{9} - \frac{1}{9} = \underline{\underline{\frac{2}{9}}}$$