



$$-\frac{3}{2} \left(\frac{1}{3}\right)^2 + \frac{2}{3} = -\frac{3}{2} \frac{1}{9} + \frac{2}{3} = -\frac{1}{6} + \frac{2}{3} = \frac{1}{2}$$

$$\frac{2}{3} + \frac{1}{6} = \frac{5}{6}$$

$$F_D(t) = P(D \leq t) = \frac{1}{2} \Rightarrow t = \frac{1}{3}$$

$$F_X(t) = t \quad t \in [0, 1]$$

$$\boxed{F_X(t)} = \frac{1}{2} \Rightarrow t = \frac{1}{2}$$