$$\Pr\{I_i = 1\} \quad \frac{1}{\lfloor x \rfloor + 1} \quad \frac{1}{\lfloor x \rfloor} \quad \cdots \quad \frac{1}{3} \quad \frac{1}{2} \quad 1 \quad 1 \quad \frac{1}{2} \quad \frac{1}{3} \qquad \cdots \qquad \frac{1}{n - \lfloor x \rfloor}$$

$$i \quad 0 \quad 1 \quad \cdots \qquad \lfloor x \rfloor \lceil x \rceil \qquad \cdots \qquad n - 1$$