

x, y ind $\text{Unif}(\{1, 2, 3\})$

$$U = \frac{Y}{X}$$

$$V = \frac{Y}{X}$$

(x, y)

(u, v)

1, 1

(1, 1)

1, 2

(2, 2)

1, 3

(3, 3)

2, 1

($\frac{1}{2}$, 1)

2, 2

(1, 2)

2, 3

($\frac{3}{2}$, 3)

3, 1

($\frac{1}{3}$, 1)

3, 2

($\frac{2}{3}$, 2)

3, 3

(1, 3)

We can find pmf of (U, V) directly from the axioms of probability.