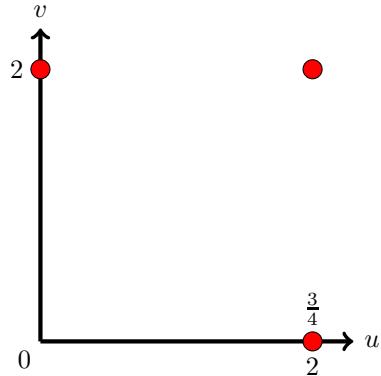


Suppose random variables  $X$  and  $Y$  have the joint probability mass function  $p_{X,Y}(u,v)$  shown below (only one of its three nonzero probabilities is shown) and their covariance is  $-1/4$ . What is the probability that  $X$  is less than  $2/3$ ?



- (a)  $1/12$
- (b)  $5/12$
- (c)  $5/6$
- (d)  $2/3$
- (e)  $1/3$
- (f)  $1/6$
- (g)  $3/5$
- (h)  $1/5$
- (i)  $1/2$
- (j)  $0$
- (k)  $7/12$
- (l)  $5/24$
- (m) None of these