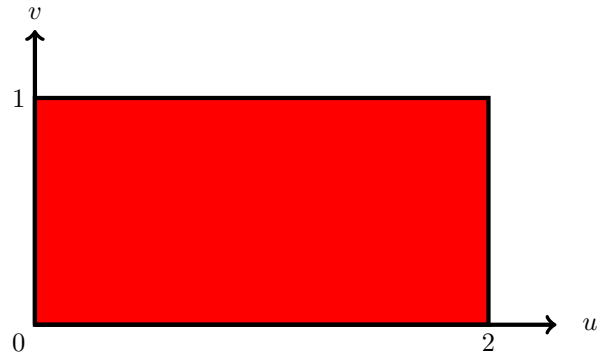


Suppose  $X$  and  $Y$  are random variables whose joint probability density function  $f_{X,Y}(u, v)$  is  $\frac{u+2v}{4}$  in the red rectangle shown below, and zero elsewhere. What is the probability that  $X$  is greater than  $4Y$  ?



- (a)  $5/24$
- (b)  $7/24$
- (c)  $5/12$
- (d)  $7/12$
- (e)  $5/6$
- (f)  $1/12$
- (g)  $1/4$
- (h)  $3/4$
- (i)  $1/9$
- (j)  $2/9$
- (k)  $4/9$
- (l) None of these