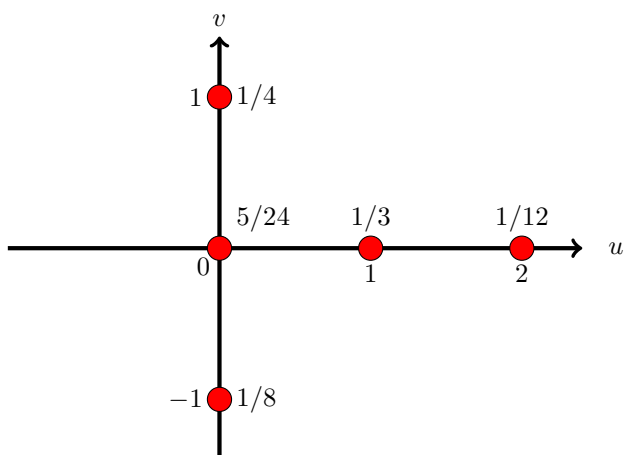


Random variables X and Y have the joint probability mass function shown below. What is the expected value of the cosine of $(X\pi + Y\pi)$?

$$p_{X,Y}(u,v)$$



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