

If X is a random variable uniformly distributed on the interval $[0, 1]$, then what is the correlation coefficient between X and X^2 ?

- (a) $\sqrt{15}/4$
- (b) $\sqrt{15}/2$
- (c) $\sqrt{15}$
- (d) $\sqrt{5}/4$
- (e) $45/4$
- (f) $25/12$
- (g) $\sqrt{15}/12$
- (h) $5/4$
- (i) $3\sqrt{15}/4$
- (j) $\sqrt{3}/4$
- (k) $1/12$
- (l) None of these