Suppose the joint probability mass function of random variables X and Y is $p_{X,Y}(u,v) = 2^{-(u+v)}$ whenever u and v are both positive integers, and is zero otherwise. What is the probability that $Y + (X-2)^2$ is greater than or equal to two?

(a) 7/8

(b) 1/2

(c) 1/4

(d) 1/8

(e) 1/16

(f) 3/4

(g) 15/16

(h) 3/8

(i) 3/16

(j) 5/16

(k) 7/16

(l) None of these