Suppose in sample space S that events A and C are conditionally independent given event B. If the probabilities of ABC^c and A^cBC are equal to each other and are each one half of the probability of ABC which is nonzero, then what is the probability of A given B?

(a) 2/3

(b) 1/3

(c) 1/2

(d) 1/6

(e) 5/6

(f) 1/12

(g) 1/4

(h) 5/12

(i) 3/4

(j) 3/8

(k) 1/24

(l) None of these