

Q Four persons independently solve a certain problem with probabilities $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{4}$, $\frac{1}{8}$. Then the probability that the problem is solved at least one of them is

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(A) $\frac{235}{256}$

(B) $\frac{21}{256}$

(C) $\frac{21}{256}$

(D) $\frac{253}{256}$

- P(problem solved by at least one of them)

$$= 1 - P(\text{solved by none})$$

$$= 1 - \left(\frac{1}{2} \times \frac{1}{4} \times \frac{3}{4} \times \frac{7}{8} \right) = 1 - \frac{21}{256} = \frac{235}{256}$$

(A)