

JEE MAIN PROBABILITY (CLASS 12) — TOTAL PROBABILITY THEOREM — PYQS

Max. Marks: 12
Questions: 3

Section A (MCQ) — 3 questions

- Q.1** A bag contains $(N + 1)$ coins – N fair coins, and one coin with 'Head' on both sides. A coin is selected at random and tossed. If the probability of getting 'Head' is $\frac{9}{16}$, then N is equal to :

[JEE Main 2026 (Online) 6th April Morning Shift]

- (1) 5 (2) 7 (3) 8 (4) 9

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- Q.2** The probabilities that players A and B of a team are selected for the captaincy for a tournament are 0.6 and 0.4, respectively. If A is selected the captain, the probability that the team wins the tournament is 0.8 and if B is selected the captain, the probability that the team wins the tournament is 0.7. Then the probability, that the team wins the tournament, is :

[JEE Main 2026 (Online) 5th April Evening Shift]

- (1) 0.74 (2) 0.76 (3) 0.72 (4) 0.78

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- Q.3** Bag A contains 9 white and 8 black balls, while bag B contains 6 white and 4 black balls. One ball is randomly picked up from the bag B and mixed up with the balls in the bag A. Then a ball is randomly drawn from the bag A. If the probability, that the ball drawn is white, is $\frac{p}{q}$, $\gcd(p, q) = 1$, then $p + q$ is equal to

[JEE Main 2026 (Online) 23rd January Evening Shift]

- (1) 24 (2) 22 (3) 23 (4) 21

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ANSWER KEY

Ques.	1	2	3										
Ans.	2	2	3										