

152. Automobile policies are separated into two groups: low-risk and high-risk. Actuary Rahul examines low-risk policies, continuing until a policy with a claim is found and then stopping. Actuary Toby follows the same procedure with high-risk policies. Each low-risk policy has a 10% probability of having a claim. Each high-risk policy has a 20% probability of having a claim. The claim statuses of policies are mutually independent.

Calculate the probability that Actuary Rahul examines fewer policies than Actuary Toby.

- (A) 0.2857
- (B) 0.3214
- (C) 0.3333
- (D) 0.3571
- (E) 0.4000