--Question Starting--
In a region where partible inheritance is practiced, a farmer divides his land among his four children. Each child receives a parcel of land worth 20, 25, 30, and 35 units respectively. Due to an unexpected legal regulation, the farmer must recall one parcel and redistribute the remaining land equally among the other three children. If the parcel worth 35 units is recalled, what would be the average worth of the land each of the three children receives after redistribution?
(1) 25 units
(2) 28.33 units
(3) 30 units
(4) None of the above
Answer Key: 4
Solution:
Step 1: Total value of land distributed initially = 20 + 25 + 30 + 35 = 110 units.
Step 2: Value of land remaining after recalling the parcel worth 35 units = 110 - 35 = 75 units.
Step 3: Redistribution among three children = 75 units / 3 = 25 units per child.
Step 4: Analyze the options given.
None of the options correctly represents the average value received by each child, which is 25 units.
Hence, Option (4) is the right answer.

--Question Starting--
In a gerontocratic society, the eldest of each family unit has the authority to choose any successor from the next generation. If the current leader is 90 years old and chooses among his grandchildren, whose ages are multiples of 5 starting from 10 up to 30, calculate the probability that a randomly chosen successor will be at least 20 years old.
(1) 1/5
(2) 2/5
(3) 3/5
(4) None of the above
Answer Key: 4
Solution:
Step 1: List the ages of potential successors: 10, 15, 20, 25, 30.
Step 2: Identify successors who are at least 20 years old: 20, 25, 30.
Step 3: Calculate the number of favorable outcomes = 3 (20, 25, 30).
Step 4: Total number of potential successors = 5 (10, 15, 20, 25, 30).
Step 5: Calculate the probability = Favorable outcomes / Total outcomes = 3/5.
None of the given options is 3/5.
Hence, Option (4) is the right answer.

--Question Starting--
In a lineage where only the eldest male can become the ritual priest, a family has one male in each generation for four generations. If the probability of each male surviving to the age of priesthood is 0.8, and the current priest is the third generation, what is the probability that the family will continue to have a distinct lineage priest for the next generation without interruption?
(1) 0.64
(2) 0.8
(3) 0.5
(4) None of the above
Answer Key: 4
Solution:
Step 1: Calculate the probability of the fourth-generation male surviving to priesthood = 0.8 (as given).
Step 2: Since the current priest is already the third generation, the continuity of the priesthood only depends on the fourth generation.
Step 3: Assess the options provided.

None of the options accurately reflects the single generation probability of 0.8.
Hence, Option (4) is the right answer.