

Binomial and Geometric Probability Worksheet

Directions: Use proper probability notation to transfer from the verbal question. Then select distribution function on calculator and enter appropriate values. Write numerical answer following probability statement.

1. On the SAT, there are five answer choices (A, B, C, D, and E). The probability of randomly guessing the correct answer is .2.
 - a) What is the probability that on a 25-question section of the SAT by complete random guessing that exactly 8 questions will be answered correctly?
 - b) What is the probability that on a 25-question section of the SAT by complete random guessing that 6 or fewer questions will be answered correctly?
 - c) What is the probability that on a 25-question section of the SAT by complete random guessing that the first correctly guessed answer is the fourth?
 - d) What is the probability that on a 25-question section of the SAT by complete random guessing that the first correct answer will be within the first 6 guesses?
 - e) What is the expected number of correct guesses on a 25-question section of the SAT exam?
2. Major universities claim that 72% of their senior athletes graduate that year. Fifty senior athletic students attending major universities are randomly selected and recorded in order of selection.
 - a) What is the probability that exactly 40 senior athletic students graduate that year?
 - b) What is the probability that 40 or 41 or 42 senior athletic students graduated that year?
 - c) What is the probability that 40 or fewer senior athletic students graduated that year?
 - d) What is the probability that 41 or more senior athletic students graduated that year?
 - e) What is the probability that 40 or more senior athletic students graduated that year?
 - f) What is the probability that the first senior athletic student to graduate in the group of 50 that year is the 5th selected?
 - g) What is the probability that the first senior athletic student to graduate in the group of 50 that year is the 30th selected?
 - h) What is the probability that the first senior athletic student to graduate in the group of 50 that year is within the first 10 selected?
 - i) What is the expected number of senior athletic students to graduate that year?
 - j) What is the standard deviation of senior athletic students graduating that year?
3. Stevo McFly is the only receiver for the EPHS football team with the likelihood of catching a pass of .15.
 - a) What is the probability that 2 passes are caught out of 6 passes?
 - b) What is the probability that no passes are caught out of 6 passes?
 - c) What is the probability that only 0 or 1 pass is caught out of 6 passes?
 - d) What is the probability that 2 or fewer passes are caught out of 6 passes?
 - e) What is the probability that more than 2 passes are caught out of 6 passes?
 - f) What is the probability that the first pass caught is on the 1st pass?
 - g) What is the probability that the first pass caught is on the 4th pass?
 - h) What is the probability that the first pass is caught within the first 3 attempts?
 - i) What is the probability that the first pass is caught after the first 3 attempts?
 - j) What is the expect number of catches with 6 attempts?
 - k) What is the expect number of attempts for the first pass caught?