

## Binomial Probability Involving “At Least” & “At Most”

1. Team  $A$  and team  $B$  are playing in a league. They will play each other five times. If the probability that team  $A$  wins a game is  $\frac{1}{3}$ , what is the probability that team  $A$  will win *at least* three of the five games?
2. A board game has a spinner that has five equal sectors, numbered 1, 2, 3, 4, and 5, respectively. If a player has four spins, find the probability that the player spins an even number *no more than* two times on those four spins.
3. Tom Parker, a star baseball player, hits one home run for every ten times he is at bat. If Parker goes to bat five times during tonight’s game, what is the probability that he will hit *at least* four home runs?
4. In the month of February at a ski resort, the probability of snow on any day is  $\frac{1}{4}$ . What is the probability that snow will fall on *at most* 2 days of a 5-day trip to that ski resort in February?
5. A mathematics quiz has 5 multiple-choice questions that are all worth the same number of points. There are 4 possible responses for each question. Jennifer selects her responses at random on every question. What is the probability she will select correct responses that will give her a grade of *at least* 80% on the quiz?