Probability

Strategy

1. Draw a tree diagram and assign probabilities to each branch
2. Multiply down each branch with successful outcome
3. Add those products together

1. A coin is flipped twice, what is the probability that 2 heads come up?

2. A coin is tossed in the air, then a die is rolled. What is the probability of getting a head and a 5? What is the probability of getting a tail and an even number?

3. If Bob's batting average is .300, what is the probability that he will get two hits in a row?

4. If the odds in favor of the Red Sox winning the series is 2 to 5, find the probability that they will win?

5. A jar contains 3 marbles; 2 black and one red. A marble is drawn and then replaced, then a second marble is drawn. What is the probability that both marbles drawn are black?

6. A jar contains 3 marbles; 2 black and one red. A marble is drawn, then a second marble is drawn. What is the probability that both marbles drawn are black?

7. Two teams, A & B, will play a "best of 2 out of 3" series. Assume Team A has a probability of 1/3 winning any game. What is the probability that Team A wins by winning 2 games in a row?

8. On a 5 question True-False test, what is the probability of getting a 100% if all the answers were chosen at random?

9. A three-stage rocket is launched. The probability for a success at stage 1 is 9/10, at stage 2 is 4/5, and stage 3 is 2/3. What is the probability of a successful launch?

10. On a certain avenue the are three traffic lights. At any give time, the probability that a light is green is 1/3.

11. What is the probability of rolling a five on a die and then tossing a coin and having tails land up?

    a. $\frac{1}{8}$ b. $\frac{1}{2}$

    c. $\frac{1}{12}$ d. $\frac{1}{4}$

12. Two quarters are tossed. What is the probability of getting two heads up?

    a. $\frac{1}{8}$ b. $\frac{1}{2}$

    c. $\frac{1}{12}$ d. $\frac{1}{4}$

13. Two number cubes are rolled. What is the probability that the sum of the numbers rolled is a 5 or an 11?

    a. $\frac{1}{6}$ b. $\frac{1}{2}$

    c. $\frac{1}{4}$ d. $\frac{2}{16}$